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Indian Music

History and Structure

7.3

आम्नाय-ग्रन्थालय,
भरतनिधि, कबीरा
वाराणसी-५

ालय
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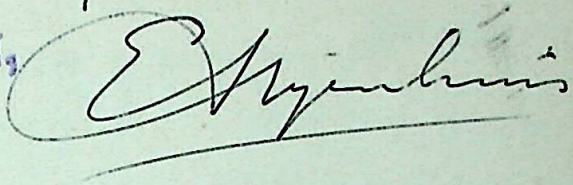

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H. KÄHLER, J.E. VAN LOHUIZEN-DE LEEUW und F. VOS

आम्नाय-
भरतनिधि, करौं
वाराणसी-5

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INDIEN

HERAUSGEGEBEN VON J. GONDA

SECHSTER BAND

INDIAN MUSIC

HISTORY AND STRUCTURE

LEIDEN/KÖLN
E.J. BRILL
1974

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प्रतिनिधि, करौंदी
वाराणसी-5

INDIAN MUSIC

HISTORY AND STRUCTURE

BY

EMMIE TE NIJENHUIS

With 14 Plates

LEIDEN/KÖLN
E. J. BRILL
1974

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भरतनिधि, कोलें
वाराणसी-5

ISBN 90 04 03978 3

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PREFACE

When I was invited to write in this series about Indian music, I realized that a volume of about 125 pages would not suffice to cover this vast field of research. But, since a considerable number of Introductions to Indian Music have already been published during the last twenty years, it would not be wise to write one more book of this type. So instead of discussing superficially the many aspects of Indian music I decided to make a selection of topics to be dealt with.

Without entering into a detailed discussion of the history of the individual rāgas and tālas I have tried to survey the historical development of the Indian tone-, scale-, rāga- and tāla-systems as well as the structure of musical compositions, as described in the various Sanskrit treatises and in modern musicological literature.

Therefore, I warn the reader that he will find neither a lively description of the rich musical life at the famous royal courts, nor a detailed discussion on the music and dance performed in the temples. Instead he will have to face a mass of reference literature. But I hope this publication will contribute to a more critical study of the history and structure of Indian music.

Utrecht 1974

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ABBREVIATIONS

NārŚ.	before 1st c. B.C.	Nāradīyā Śikṣā Sāmavedīyā
BhN.	1st c. B.C.	Nāṭyaśāstra by Bharata
Aum.	before 8th c. A.D.	Aumāpatam
MBṛh	8th c. A.D.	Bṛhaddeśī by Mataṅga
JagSC.	12th c.	Saṃgītacūḍāmaṇi by Jagadekamalla
NandBh.	12th c.	Bharatārṇava by Nandikeśvara
PārśSS.	13th c.	Saṃgītasamayasāra by Pārśvadeva
ŚārṅSR.	1210-1247	Saṃgītaratnākara by Śārṅgadeva
NārSM.	14th c.	Saṃgītamakaranda by Nārada
NārCRN.	14th c.	Catvāriṃśacchatarāganirūpaṇa by Nārada
SudhSS.	1350	Saṃgītopaniṣatsāroddhāra by Sudhākalaśa
KuSR.	1433-1468	Saṃgītarāja by Kumbha
ŚubhSD.	late 15th c.	Saṃgītadāmodara by Śubhaṅkara
RāmSM.	1550	Svaramelakalānidhi by Rāmāmātya
PuṃḌRM.	late 16th c.	Rāgamañjarī by Puṃḍarīkavitthala
ŚrīRK.	late 16th c.	Rasakaumudī by Śrīkaṇṭha
SomRV.	1609	Rāgavibodha by Somanātha
VeṅkCP.	1620	Caturdaṇḍīprakāśikā by Veṅkaṭamakhin
DāmSD.	ca. 1625	Saṃgītadarpaṇa by Dāmodara
HṛdHK.	late 17th c.	Hṛdayakautuka by Hṛdayanārāyaṇadeva
HṛdHP.	late 17th c.	Hṛdayaprakāśa by Hṛdayanārāyaṇadeva
AhSP.	1665	Saṃgītapārijāta by Ahobala
LocRT.	late 17th c.	Rāgataraṅgiṇī by Locana
ŚrīRT.	late 17th c.	Rāgatattvavibodha by Śrīnivāsa
TulSS.	1735	Saṃgītasārāmṛta by Tulaja
GovSC.	late 18th c.	Saṃgrahacūḍāmaṇi by Govinda
PrātSS.	late 18th c.	Saṃgītasāra by Pratāpasiṃha
BhātKPM.	late 19th c.	Kramik Pustak Mālikā by Bhātkhaṇḍe
SambD.	20th c.	Dictionary of S.I. Music by Sambamoorthy
SambH.	20th c.	History of Indian Music by Sambamoorthy
SambSIM.	20th c.	South Indian Music by Sambamoorthy

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CHAPTER ONE

DOCUMENTATION

The oldest document of Indian music is the widely known collection of religious hymns (*sāman*) meant to be sung during the sacrifices (especially the Soma sacrifice) and called Sāmaveda which, being the textbook of the *udgātṛ* priest, mostly contains the same hymns (seventy-five excepted) as the Ṛgveda (the collection of verses, *ṛc*). In the Sāmaveda the Ṛgvedic accents *svarita* (kȧ), *anudātta* (kạ, the non-accentuated syllable) and *udātta* (ka, the chief tone, "raised" accent), probably only used to indicate the rise and fall of the voice instead of fixed musical pitches, are replaced by the symbols 1, 2 and 3. According to Richard Simon[1] amongst others, the primary purpose of both the Ṛgvedic and the Sāmavedic notations was to indicate the grammatical accent, which leaves the problem of the relationship between the notation and the actual recitation or singing unsolved.

The three Sāmavedic collections that have come down to us, the Pūrvārcikā, the Uttarārcikā and the Āraṇyakasaṃhitā (a collection to be sung exclusively in the seclusion of a wood (*araṇya*) and only used by some Vedic sects), are in fact the textbooks for the priest-singer who was supposed to know the appropriate melodies by heart. The Pūrvārcikā consists of 585 single stanzas (*yoni*) invoking Indra and other gods, each sung to a particular melody. The Uttarārcikā, which for the greater part contains songs consisting of three stanzas, is a more complete textbook, since it includes the solo songs (*parisāman*) usually sung by the Prastoṭṛ[2] that are not found in the Pūrvārcikā, possibly because their use was not confined to the Soma sacrifice alone.

Very likely it was for the sake of Vedic students that the songs of the Pūrvārcikā and the Āraṇyakasaṃhitā were compiled in song books (*gāna*): the songs of the former collection in the *grāmegeyagāna* (i.e. the *gāna* to be sung in a village), and the songs of the latter collection in the *āraṇyegeyagāna* (i.e. the *gāna* to be sung in a wood). These song books provide the musical notation (cypher or syllabic notation) of the melodies, while the words of

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[1] Die Notationen der vedischen Liederbücher, in: Wiener Zeitschr. f. die Kunde d. Morgenl. 27 (1913), p. 308.

[2] Compare Lāṭyāyana Śrautasūtra 1, 5, 8 and 1, 6, 1.

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the songs are presented in a more elaborate way than in the *ārcikās* and *saṃhitās*, namely according to the manner in which they are sung, as for instance by prolonging vowels, repeating syllables and inserting interpolations (*stobhas*, lit. "praises", comparable to the *jubili* of European plainsong).

The names of the melodies are mentioned in the first and second *prapāṭhaka* (i.e. lesson) of the Uttarārcikā, but it was left to the priest-singer to adapt the melodies of the basic stanzas (*yoni*) to the other stanzas in accordance with the rules of correct liturgical recitation. At a later date this oral tradition of adaptation (*ūha*) was laid down in the Puṣpasūtra.[3] Finally even study of the Puṣpasūtra no longer sufficed for the Vedic student, since exactly how the melodies of the *grāmegeya*- and *āraṇyegeyagāna* were to be adapted was set out in the *ūhagāna* and *ūhyagāna* (*ūhya* = *ūharahasya*; *rahasya* = *āraṇyaka*, i.e. to be used in the wood only) respectively.[4]

Several Brāhmaṇas[5] and Sūtras[6] allude to the singing of particular sāmans and to the playing of musical instruments. Some Śikṣās[7] mention the notes or intervals (*svara*) and the basic scales (*grāma*) of an ancient musical system which is generally considered to have developed from the Vedic chant. The author of the Nāradīyā Śikṣā[8] compares the notes of secular and religious music. He is the first to associate musical notes with particular deities,[9] social classes,[10] animals,[11] and colours[12] — a prevalent concept in Indian musical aesthetics — as well as with parts of the fingers,[13] which reminds us of the Guidonian hand in European music during the Middle Ages.

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[3] Edited by Richard Simon, in: Abh. d. Philos.-Philol. Kl. d. Kgl. Bayer. Ak. d. Wiss. 23 (1909), p. 581-780.

[4] For the historical development of the Samavedic texts and their interrelationship compare W. Caland, Pañcaviṃśa-Brāhmaṇa, Calcutta 1931, Introduction. The four *gānas* laid down according to the Kauthuma tradition are available in an edition prepared by Satyavrata Sāmaśrāmī, Bibliotheca Indica, vols. I-V, Calcutta 1874. For literature on the Sāmaveda and Vedic music see also: L. Renou, Bibliographie védique, Paris 1931, p. 219; R. N. Dandekar, Vedic Bibliography, I, Bombay 1946, p. 22; II, Poona 1961, p. 41; 496; III, Poona 1973, p. 68; 721; J. Gonda, Vedic Literature, Wiesbaden 1974, ch. VII, 1.

[5] Tāṇḍya (= Pañcaviṃśa) Brāhmaṇa 5, 5, 4f.; 5, 6, 12f. and Jaiminīya Brāhmaṇa 2, 69, 70; 2, 45, 418.

[6] Bhāṣika Sūtra 3, 17. Āpastamba Śrautasūtra 21, 17-19. Lāṭyāyana Śrautasūtra 3, 12, 8 and 4, 1. Śāṅkhāyana Śrautasūtra 15, 10f.; 17, 3-4.

[7] Māṇḍukī Śikṣā 1, 8-11; Yājñavalkyā Śikṣā 1, 6f. Śaiśirīyā Śikṣā 175. Pāṇinīyā Śikṣā 12.

[8] Nāradīyā Śikṣā 1, 5, 1-2.

[9] Nāradīyā Śikṣā 1, 5, 13f.

[10] Nāradīyā Śikṣā 1, 4, 3f.

[11] Nāradīyā Śikṣā 1, 5, 3.

[12] Nāradīyā Śikṣā 1, 4, 1f.

[13] Nāradīyā Śikṣā 1, 7, 3.

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Not only Vedic literature affords proof that music in India dates from very early times; secular literature too, as for instance the great epics, the Mahābhārata[14] and the Rāmāyaṇa,[15] contains numerous references to the terminology of ancient Indian music.

Systematic treatment of the theory and instruments of Indian music first appears, however, in a treatise on dramaturgy, Bharata's Nāṭyaśāstra. Why music should be so elaborately dealt with in a treatise on dramatic art is explained by the fact that music had an important function in the ancient Indian theatre. It was performed not only before the play started (during the preliminaries), but also during the course of the play in the form of *dhruvā* (= *dhruvapada*) songs.[16]

From the time when Bharata wrote his chapters on music (chapters 28-32) of his Nāṭyaśāstra (compiled in the first century B.C. or the first century A.D.) up to the next landmark in the history of Indian music, Mataṅga's Bṛhaddeśī (ca. eighth century A.D.) which introduces folk material (*deśī rāgas*) in standardized (i.e. classical) music, only one treatise, the Dattilam (in its extant form a summary of ancient musical theory but originally a larger work), has come down to us, though several ancient authorities on music (Durgaśakti, Viśākhila, Yāṣṭika, Kohala, Tumburu, Kaśyapa, etc.) must have lived during that period, as they are mentioned by later authors.

Only a vague idea of the music of that period can be gathered from the few minor references found in general literature. The chapters on music in the Viṣṇudharmottara Purāṇa, the Vāyu Purāṇa and the Mārkaṇḍeya Purāṇa[17] merely reflect the ancient theories described in the Nāṭyaśāstra. Whereas the treatises of the ancient period (the Nāradīyā Śikṣā, the Nāṭyaśāstra and the Purāṇa chapters) only mention five or seven basic rāgas (*grāmarāgas*), by the commencement of the Middle Ages the Bṛhaddeśī reveals an existing elaborate system of rāgas, consisting of parent rāgas (i.e. the *grāmarāgas*) and secondary melodic patterns called *bhāṣās*, *bhāṣāṅgas* and *upaṅgarāgas*. It must have taken centuries to develop such an intricate system. Unfortunately we do not know which tradition was handed down by Mataṅga, the author of the Bṛhaddeśī. All we can find are a few

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[14] Compare Leela Omcherry, Classical Music in the Mahābhārata, in: Sangeet Natak (Journal of the Sangeet Natak Academy) 5 (July-Sept. 1967), p. 78-88.

[15] Compare P. C. Dharma, Musical Culture in the Rāmāyaṇa, in: Indian Culture 4 (1937-38), p. 447-453.

[16] Compare chapter 4 (composition), p. 117 and note 145.

[17] See Alain Daniélou and N. R. Bhatt, Textes des Purāṇa sur la théorie musicale, vol. I, Pondichéry 1959.

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references to ancient rāgas in general literature, some examples of which will be given hereafter.

Harivaṃśa 93, 22 refers to a "*devagāndhāra*" *chalikya* (= *chalika*) song. In the music of later centuries *devagāndhāra* is the name of a well known rāga. In the next verse the author of the Harivaṃśa defines the musical structure of the above mentioned song as "*āgāndhāragrāmarāgam*", i.e. "being based on the grāmarāga up to the [note] gāndhāra". The fact that the song is elucidated in terms of the ancient system (i.e. the system of grāmarāgas), may indeed indicate that this musical reference dates from the older period. The sixth century prose-romance Vāsavadattā[18] refers to a rāga *vibhāṣa* sung by the Kārpāṭika minstrels. Kalidāsa (ca. fifth century) prescribes that the rāga *kakubha* should be sung in the fourth act of his drama Vikramorvaśīyā.[19] However, these references to rāgas do not conclusively prove that the melodies were already in existence during the ancient period, that is to say, before the time of the Bṛhaddeśī, since the names of the rāgas may have been inserted in the original text by a later copyist.

A similar problem arises, when we try to date Bharata's Gītālaṃkāra[20] also known as Vādimattagajāṅkuśa. In the introduction to this book (p. VII), Alain Daniélou suggests that the Gītālaṃkāra must be a very old text — prior even to the Nāṭyaśāstra — because it is quoted in various recensions and most probably also in the original version of the Pañcatantra (dated between 300 B.C. and 750 A.D.). I myself, however, could only find the said reference, which is a reference to the 36 *varṇas* (obviously forerunners of the later *rāgas*),[21] in the Pañcakhyānaka recension of the Pañcatantra by the Jaina Monk Pūrṇabhadra,[22] dating from 1199 A.D. In the oldest recension, entitled Tantrākhyāyika,[23] the whole story of the singing ass propounding musical theory is missing. This means that the *varṇas* of the Gītālaṃkāra certainly existed before 1199 A.D., but not necessarily before the Nāṭyaśāstra or the Bṛhaddeśī.

In addition to the above mentioned Sanskrit references there is a famous Tamil poem, the Śilappadikaram,[24] written in the second century A.D. by

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[18] Edited by L. H. Gray, Delhi 1962, p. 55, no. 45.

[19] Raja Tagore's Sanskrit Library no. 26, Calcutta 1873.

[20] Edited by A. Daniélou and N. R. Bhatt, Pondichéry 1959.

[21] Compare chapter 14 of the Gītālaṃkāra.

[22] Critically edited by J. Hertel, Harvard Univ., Cambridge, Massachusetts, 1908, book 5, tale 41.

[23] Edited by J. Hertel, Harvard Univ., Cambridge Mass., 1915.

[24] A. Daniélou, Shilappadikaram (The Ankle Bracelet) by Price Ilangô Adigal (Translation), New York 1965, especially cantos 7 and 8; S. Ramanathan, Cilappatikārattu icai nuṇukka viḷakkam, Madras 1956.

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Prince Illango Adigal, which contains some interesting information about the ancient Karṇāṭak modes (*paṇṇ*) and the early arched harp type of *viṇā* (*yāḻ*).

So apart from Mataṇga's Bṛhaddeśī,[25] scarcely any material is at hand regarding Indian music in the early Middle Ages and that work has unfortunately come down to us in an incomplete and rather corrupt manuscript dealing only with the basic scales (*grāma*), micro-intervals (*śruti*), notes or intervals (*svara*), secondary scales (*mūrchanā*), basic modes (*jāti*), melodic patterns (*rāga*) and the structure of musical composition (*prabandha*). The original work must have been much larger since, in the opinion of later authors (Siṃhabhūpāla, Abhinavagupta, Nānyadeva and Dāmodaragupta in his Kuṭṭinīmata), Mataṅga was also an expert on musical instruments (especially on the flute) and dramaturgy.

In the eleventh century several commentaries on the Nāṭyaśāstra appeared. First, at the beginning of the century, Abhinavagupta wrote his Abhinavabhāratī[26] and towards the end of the century Nānyadeva his elaborate commentary, the Bharatabhāṣya,[27] also named Sarasvatihṛdayālaṃkāra, which is a complete treatise in itself. The dating of Nandikeśvara's two works, Bharatārṇava[28] (dealing with dance movements and rhythm) and Abhinayadarpaṇa[29] ("The Mirror of Gestures", a treatise on the emotion (*rasa*) expressed in dancing), still remains uncertain. A certain Nandikeśvara is quoted by Mataṅga in connection with the *mūrchanās* of twelve notes,[30] but I doubt whether the author mentioned by Mataṅga is the same person as our dance expert. According to M. Rāmakṛṣṇa Kavi[31] the Bharatārṇava was written after the eleventh century. Personally I would date this work even later, that is to say after the twelfth century, since it often cites the twelfth century author Haripāla.

In the twelfth century some important works on music were written by royal authors. First to be mentioned are the two Chalukya kings Someśvara and his son Pratāpacakravartin (= Jagadekamalla). King Someśvara

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[25] Edited by K. Sāmbaśiva Śāstrī, Trivandrum 1928.

[26] The Nāṭyaśāstra, with the commentary Abhinavabhāratī, edited by M. Rāmakṛṣṇa Kavi and J.S. Pade, 4 vols., Gaekwad's Oriental Series no. 36, 68, 124, 145, Baroda 1926, 1934, 1954 and 1964.

[27] The Bharatabhāṣya of Nānyadeva, edited by Chaitanya P. Desai, vol. I, Khairagarh 1961.

[28] Bharatārṇava of Nandikeśvara, with translation in English and Tamil, edited by S.K. Vasudeva Śāstrī, Tanjore Sarasvati Mahal Series no. 74, Tanjore 1957.

[29] Nandikeśvara's Abhinayadarpanam, crit. ed. and English transl. by Manomohan Ghosh, Calcutta ²1957.

[30] Bṛhaddeśī, p. 32, line 10.

[31] Bharatakośa, Tirupati 1951, Introduction p. III.

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devoted two chapters of his encyclopaedia Mānasollāsa (= Abhilāṣārthacintāmaṇi), compiled in 1131 A.D., to music.[32] King Jagadekamalla, who ruled from 1134-1143 A.D., wrote a treatise on music named Saṃgītacūḍāmaṇi.[33] Another Chalukya king, Bhīmadeva's son Haripāla, who lived about 1175 A.D. and only ruled for four years between the reign of Bhīmadeva and Ajayapāla, composed the Saṃgītasudhākara.[34] In 1180 A.D. Somarāja (= Somabhūpāla, one of king Ajayapāla's body guards (*vettradhara*) wrote a work on music entitled Saṃgītaratnāvali.[35] Another Saṃgītaratnāvali[36] was written about 1240 A.D. by Jāyana, the commander of the elephant forces of Kākatīya Gaṇapati of Warangel (1198-1263 A.D.).

During the first half of the thirteenth century Śārṅgadeva wrote his Saṃgītaratnākara[37] ("The Ocean of Music"), a treatise which has been preserved in many manuscripts and is frequently quoted by later authors. This famous work gives a clear exposition of the theory of Indian music and dance from the ancient period to the date of writing. It became the classic amongst Sanskrit works on Indian music and is often cited as authoritative on contemporary music by musicologists living even after the sixteenth century. As late as 1735 Tulaja, author of the Saṃgītasārāmṛta,[38] goes on quoting lenghty passages of that work as if they were still applicable when, as a matter of fact, by that time the Saṃgītaratnākara must have been quite out of date.

Although the exact dates cannot be given, it is safe to assume that soon after the Saṃgītaratnākara, towards the end of the thirteenth century, two other important works on music appeared, the Saṃgītasamayasāra[39] by the Jain author Pārśvadeva and the Saṃgītamakaranda[40] by Nārada. To a large extent both authors base their opinions on Śārṅgadeva. The author of

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[32] An edition of these two chapters on music, which unlike the other chapters of this encyclopaedia have never been edited, is in course of preparation by V. Raghavan.

[33] The incomplete Malayalam palm-leaf manuscript of this work has been edited by D.K. Velankar, Gaekwad's Oriental Series no. 128, Baroda 1958.

[34] Saṃgītasudhākara by Haripāla, mss. in Tanjore, Baroda, Madras and Trivandrum.

[35] Saṃgītaratnāvali by Somarāja, mss. in Bikaner, Baroda and Calcutta.

[36] Bharatakośa, p. XVII.

[37] Saṅgītaratnākara by Śārṅgadeva, with the commentaries Kalānidhi of Kallinātha and Sudhākara of Siṃhabhūpāla, edited by S. Subrahmaṇya Śāstrī, 4 vols., Madras 1943, 1944 (second rev. ed. by Pandit V. Krishnamacharya, Madras 1959), 1951 and 1953. English translation of vol. I by C. Kunhan Rājā, The Adyar Library Series no. 51, Madras 1945. Eng. tr. of vol. IV by K. Kunjunni Rājā and Rādhā Burnier, Adyar Library Bulletin 23 (parts 3, 4 Dec. 1959).

[38] Saṃgītasārāmṛta by Tulaja, edited by S. Subrahmaṇya Śāstrī, Madras 1942.

[39] Saṃgītasamayasāra by Pārśvadeva, edited by T. Gaṇapati Śāstrī, Trivandrum Sanskrit Series no. 87, Trivandrum 1925.

[40] Saṃgītamakaranda by Nārada, edited by Mangesh Rāmakrishna Telang, Gaekwad's Oriental Series no. 16, Baroda 1920.

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the Saṃgītamakaranda however evolves a system of male and female rāgas which is not found in the Saṃgītaratnākara or in any other classical treatise on music except the Gītālaṃkāra. This system puts forward in elementary form the well known *rāga-rāginī* system — mostly consisting of six main *rāgas* and thirty secondary *rāginīs* — which was developed by later, especially North Indian, authors.

To the Jain author Sudhākalaśa, who wrote the Saṇgītopaniṣatsāroddhara[41] in 1350, we owe the first iconographical description of rāgas, which personifies the melodic patterns as pseudo-deities of the Jainist religion. However, it is likely that this kind of rāga personification in verses (*dhyāna*, lit. "contemplation formula") was already in existence before Sudhākalaśa's days, as a particular verse[42] in the Bṛhaddeśī points in this direction.

After the fourteenth century there was a freer exchange of culture between the Hindu and Muslim worlds. Musicians from Persian and Arabian countries had begun to take great interest in Indian music.[43] About 1375 the author of the Farid-ul-Zamanfil Maarefat-i-Ilham, a treatise on Persian-Arabian music, also wrote a work on Indian music entitled Ghunyat-ul-Munya. In it he cites Bharata's Nāṭyaśāstra and other, less known works on Indian music such as the Saṃgīta Vinoda, the Saṃgīta Mudrā, the Satanak and the Rāgārṇava. Umar Sama Yahya, an Afghan who studied Indian music in India, wrote (in Persian) the Lahjat-i-Sikandar Shahi, quoting from the Saṃgītaratnākara, the Saṃgītamataṅga, the Nṛttasaṅgraha, the Udbharat (= the Nāṭyaśāstra), the Sudhanidhisaṅgītasamassiya (?) and the Saṇgīta-kalpataru.

The fourteenth century Sufi noble of Turkish origin, Amir Khusrau, who is said to have introduced the *sitār* and the *tablā* in Indian music and invented compositions such as the *qaul* (now *qawwali*) and the *taranā*, is also alleged to have invented new rāgas by combining Persian and Indian melodies. The story about Amir Khusrau's contest with the Deccan musician Naik Gopal is ficticious, since the latter lived two centuries later during the reign of Akbar. Amir Khusrau composed the Ijaz-i-Khusravi in which the section Harf-i-Siyum is of special interest to musicologists.

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[41] Saṃgītopaniṣatsāroddhara by Vācanacārya Sudhākalaśa, edited by U. P. Shah, Gaekwad's Oriental Series no. 133, Baroda 1961.

[42] Bṛhaddeśī p. 140f., verse 367.

[43] The following references to Persian and Arabian literature on Indian music are taken from: A. Rashid, Society and Culture in Medieval India, Calcutta 1969, p. 107-121, and N. A. Jairazbhoy, The Rāgs of North Indian Music, London 1971, p. 16-26. One might also consult: R. V. Poduval, Music and the Muslim Courts in India, in: Madras Music Academy Annual Conference Souvenir (Dec. 1953), Madras 1954.

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References to music are also made in Khusrau's *masnavis* Qiran-us-Saadin and Nuh Sipihr, as well as in his other works such as the Hasht Bahisht.

Although orthodox Muslim religion regarded music with disapproval — an exception being the Sufi movement which considered music a means towards realizing God — most of the Muhammadan sovereigns showed keen interest in Indian music. Akbar (1555-1605), Jahangir (1605-1627), Shahjahan (1628-1658), Bahadur Shah (1707-1712) and Muhammad Shah (1719-1748) were all patrons of music and art in general. Only Auraṇgzeb (1658-1707), though fond of music, preferred an ascetic life.

In the fifteenth century sultan Sāhi of Kaḍa (forty miles from Allahabad), who was a vassal of king Ibrahim of Jaunpur, was so interested in Indian music that he formed a large library of books on Indian music and dance, and in 1429 A.D. invited famous musical experts to a congress for the purpose of compiling a work (in Sanskrit) on the theory of classical Indian music. The greater part of this work, known as the Saṅgītaśiromaṇi,[44] generally reproduces well established opinions; but in respect of the grāmas it supports a tradition adhered to by only a minority whose views are confined to the Gītālaṃkāra and a few other works. Umar Sama Yahya's Persian treatise on Indian music, the Lahjat-i-Sikander Shāhi,[45] appeared under the patronage of sultan Sikander Lodī of Delhi (1489-1517).

Although Hindu kings spent a great deal of time fighting their Muslim conquerors, they did not neglect the arts. Twenty years after the Saṅgīta-śiromaṇi (1449 A.D.), the Rajput king Kumbhakarṇa of Citrakuṭa wrote the Saṃgītarāja.[46] This voluminous compilation on the classical theory of music closely follows the Saṃgītaratnākara, but the dhyānas of the rāgas are obviously borrowed from Sudhākalaśa's Saṃgītopaniṣatsāroddhara. At about the same time the Bengal author Śubhaṃkara probably wrote his Saṃgītadāmodara.[47] Many of the rāgas mentioned in this work, which only describes them iconographically and omits their musical definition, are not found in the classical rāga system. This divergence in systems may be due to the fact that by this time various regional styles had already developed. The schism between North and South Indian music which may already have originated in Śārṅgadeva's times (i.e. the thirteenth century)

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[44] An edition and English translation of the Saṃgītaśiromaṇi is being prepared by Pandit Mathura Datt Pant and the present writer.

[45] Ms. at Lucknow; cf. Nazir Ahmed, The Lahjat-i-Sikander Shahi, in: Islamic Culture 28 (1954), p. 410-417.

[46] Saṃgītarāja by Mahārāṇa Kumbhā, vol. I, edited by Premlata Sharma, Banaras 1963.

[47] Saṃgītadāmodara by Śubhaṃkara, edited by G. Śāstrī and G. Mukhopadhyāya, Calcutta Sanskrit College Research Series no. 11, text no. 8, Calcutta 1960.

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and finally resulted in two completely different types of music — the North Indian or Hindustānī style and the South Indian or Karṇāṭak style — became rigidly fixed by the sixteenth century during Akbar's reign.

During the beginning of the sixteenth century the famous king Māna Siṃha Tumāra of Gwalior (1486-1517), who was a patron of music and himself a composer, wrote his Hindī treatise on music, the Mānakutūhala,[48] which was translated into Persian in the seventeenth century by Faqir Ullah.[49]

In his Svaramelakalānidhi (1550)[50] the Karṇāṭak expert Rāmāmātya presents a new system of rāga classification. This no longer classifies rāgas according to their basic modes (*jāti*), as the musicologists of the Middle Ages did, but classifies them according to their scales (*mela*).

In the second half of the sixteenth century Puṃḍarīkavitthala, a South Indian musicologist who migrated to the North, introduced the Karṇāṭak *mela* system into Hindustānī music. Puṃḍarīkavitthala is the author of three works on music (Sadrāgacandrodaya,[51] Rāgamāla[52] and Rāgamañjarī)[53] and one treatise on dancing (Nartananirṇaya).[54] His pupil Śrīkaṇṭha, who was also a South Indian who settled in the North, wrote the Rasakaumudī[55] which reveals his master's influence.

Alongside this Karṇāṭak *mela* system, another system of rāga classification was developed by the North Indian authors which was based on six, or more, primary male *rāgas* and a number of secondary female rāgas (*rāginīs*), some of which are referred to as female even although their iconographic description indicates the opposite. In the sixteenth century this system of rāga classification — obviously traceable to the ancient notion of male and female rāgas in Nārada's Saṃgītamakaranda and Bharata's Gītālaṃkāra — is applied in works such as Nārada's Catvāriṃśacchatarāganirūpana,[56] Kṣemakarṇa's Rāgamāla[57] and Puṃḍarīkavitthala's Rāgamāla.[58]

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[48] Ms. in the possession of the Nawab Sahib of Rāmpur.

[49] Ms. of this work (Mānkautūhal) and of another work (Rāgdarpana) by the same author at Aligarh, Muslim University.

[50] Svaramelakalānidhi by Rāmāmātya, edited with intr. and English transl. by M.S. Rāmaswāmī Aiyar, Annamalai 1932.

[51] Sadrāgacandrodaya by Pumdarīkavitthala, edited by D.K. Jośi, Bombay 1916(?).

[52] Rāgamāla by Puṃḍarīkavitthala, edited by D.K. Jośi, Bombay 1916(?).

[53] Rāgamañjarī by Puṃḍarīkavitthala, edited by D.K. Jośi, Poona 1918.

[54] Manuscripts by Nartananirṇaya of Puṃḍarīkavitthala are in Tanjore, Baroda, Bikaner and Jammu-Kashmir (Mahārāja's Library).

[55] Rasakaumudī by Śrīkaṇṭha, edited by A.N. Jani, Baroda 1963.

[56] Catvāriṃśacchatarāganirūpana by Nārada, edited by D.K. Jośi, Poona 1914.

[57] Manuscripts of Kṣemakarṇa's Rāgamāla in: India Office Library, London; also in Oxford and Bikaner.

[58] Cf. note 52.

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These texts do not mention the musical characteristics of the rāgas, but only contain iconographic or poetic descriptions regarding the pictorial representation of the melodies. But the Rasakaumudī by Śrīkaṇṭha and the Saṃgītadarpaṇa[59] by Dāmodara (probably late sixteenth or early seventeenth century) furnish the iconographic or poetic descriptions (*dhyāna*) together with the musical definitions (*lakṣaṇa*) of the rāgas.

An interesting link between Karṇāṭak and Hindustānī music is the Rāgavibodha,[60] written in 1609 by the South Indian expert Somanātha. In describing the musical characteristics of the rāgas this author sometimes follows Rāmāmātya's South Indian system. In a number of cases, however, he adopts the opinions of the North Indian author Puṃḍarīkavitthala, who often deviates from Rāmāmātya's mela system. This explains why some of Somanātha's rāgas are still practised in modern Karṇāṭak music, while other rāgas of his only figure in modern Hindustānī music.

It is the seventeenth century South Indian musicologist Veṅkaṭamakhin who really laid the theoretical foundations for modern Karṇāṭak music. In his Caturdaṇḍiprakāśika[61] written in 1620 he changed Rāmāmātya's *rāga* and *mela* classification into a system which, with slight modifications influenced by the eighteenth century authors Tulaja (Saṃgītasārāmṛta, 1735)[62] and Govinda (Saṃgrahacuḍāmaṇi,[63] towards the end of the eighteenth century), is still used in modern Karṇāṭak music.

But even in the centuries following Veṇkaṭamakhin the ancient theories of music were not abandoned completely. As a rule later musicologists devoted the greater part of their works to the classification of rāgas and treated the ancient theory of svaras, śrutis, etc. less exhaustively. The seventeenth century author Cikkabhūpāla, however, wrote a large compilation entitled Abhinavabharatasārasaṅgraha,[64] which summarizes the ancient theories discussed in the Nāṭyaśāstra and also refers to medieval and contemporary treatises.

In the seventeenth century Hindustānī music underwent considerable change. Whereas Puṃḍarīkavitthala has preserved the Karṇāṭak basic notes

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[59] Saṃgītadarpaṇa by Dāmodara, edited with introduction and notes in English and Tamil by K. Vasudeva Śāstrī, Saraswathi Mahal Series no. 34, Madras Government Oriental Series no. 66, Tanjore 1952. Translation of chapter 1 and 2: A. A. Bake, Bijdrage tot de Kennis der Voor-Indische Muziek, Thesis, Utrecht 1930.

[60] Rāgavibodha by Somanātha, edited by M. S. Rāmaswāmī Aiyar, Madras 1933.

[61] Caturdaṇḍiprakāśikā by Venkaṭamakhin, edited by S. Subrahmaṇya Śāstrī, T. V. Subba Rao and T. L. Veṅkaṭarāma, Madras 1934.

[62] Cf. Note 38.

[63] Saṃgrahacudāmaṇi by Govinda, edited by S. Subrahmaṇya Śāstrī.

[64] Abhinavabharatasārasaṅgraha of Cikkabhūpāla, edited by R. Sathyanarayana, Mysore 1960.

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(*śuddha svaras*): sa = d, ri = e♭, ga = f♭, ma = g, pa = a, dha = b♭, ni = c♭ (representing Rāmāmātya's interpretation of the ancient basic scale *ṣaḍjagrāma*: sa = d, ri = e, ga = f, ma = g, pa = a, dha = b, ni = c), seventeenth century North Indian authors, namely Locana (in his Rāgatarańgiṇī)[65] and Hṛdayanārāyaṇadeva (in his Hṛdayaprakāśa[66] and Hṛdayakautuka[67]), introduced a new basic scale in Hindustānī music consisting of the notes: sa = d, ri = e, ga = f, ma = g, pa = a, dha = b, ni = c. However not only the basic scale was altered; there was change too in the musical structure of the individual rāgas. Some of the older rāgas became obsolete and new rāgas were invented.

Hindustānī music never developed such a rigid system of rāga classification as Karṇāṭak music did. Towards the close of the nineteenth century the North Indian musicologist Bhātkhaṇḍe[68] — obviously influenced by the twelve *saṃsthānas* of Locana and Hṛdayanārāyaṇadeva — invented a system of ten *ṭhāṭas* which has gained general recognition. The peculiarities of Hindustānī rāgas regarding execution ('Aufführungspraxis'), times of performance and aesthetic content obviously defy classification according to purely scalar principles. Many of the modern Hindustānī rāgas in their present form date back to Ahobala's Saṃgītapārijāta (1665),[69] a work which is closely followed by Śrīnivāsa's Rāgatattvavibodha.[70] Some Hindustānī rāgas are not even older than Pratāpasiṃha's Sańgit Sār,[71] a Hindī compilation of the theory of ancient Indian and contemporary Hindustānī music written towards the end of the eighteenth century. Nevertheless a number of rāgas that have retained several of their ancient characteristics are still used in modern Hindustānī music.

In 1784 the English orientalist Sir William Jones wrote his essay "On the Musical Modes of the Hindus".[72] Muḥammad Rezā, the author of a Persian

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[65] Rāgatarańginī by Locana, edited by D.K. Jośi, Poona 1918; complete edition by Baladeva Miśra, Darbhanga Raj Press, Darbhanga 1934.

[66] Hṛdayaprakāśa by Hṛdayanārāyaṇadeva, edited by D.K. Jośi, Poona 1918.

[67] Hṛdayakautuka by Hṛdayanārāyaṇadeva, edited by D.K. Jośi, Poona 1918.

[68] V.N. Bhātkhaṇḍe, A Comparative Study of Some of the Leading Music Systems of the 15th, 16th, 17th and 18th Centuries, Bombay [1]1941, Madras [2]1949. By the same author: Hindustānī Sańgītapaddhati, Kramik Pustak Mālikā, vols. I-VI, Hathras 1953-1957, and: Hindustānī Sańgītapaddhati, Sańgītaśāstra, vols. I-IV, Hathras 1956-1957.

[69] Saṃgītapārijāta by Ahobala, edited by K. Vedāntabāgīśa and S.P. Ghoṣa, Calcutta 1879.

[70] Rāgatattvavibodha by Śrīnivāsa, edited by Vibhukumar S. Desai, Gaekwad's Oriental Series no. 126, Baroda 1956.

[71] Sańgit Sār, compiled by Pratāp Sinha Deo of Jaipur (1779-1804), I-VII, Poona 1910-1912.

[72] Published in: Music of India, by W. Jones and N.A. Willard, Calcutta 1793, 134 and second rev. ed. 1962, p. 89-112; and in: Hindu Music from Various Authors, comp. by S.M. Tagore, Chowkhamba Sanskrit Studies XLIX, Varanasi 1965 (Calcutta [2]1882), p. 125-160.

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treatise on Indian music, the Naghmāt-i-Āsafī (1813),[73] is said to have introduced the *bilāval* scale (comparable to the Western major scale) as standard.[74] Viṣṇu Nārāyaṇa Bhātkhaṇḍe, to whom we owe the classification of Hindustānī rāgas into ten basic scales (*ṭhāṭ*), wrote several important works on Indian music. His Saṃgīta Śāstra[75] deals with the historical development and different traditions of the Indian rāgas. In his Kramik Pustak Mālikā[76] the author illustrates the Hindustānī rāgas and their traditional styles (*gharāṇa*) by furnishing numerous, valuable music examples taken from contemporary practice.

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[73] Edited by the Baṅgīya Sahitya Pariṣad, Calcutta [1]1842-49; [2]1916.

[74] Compare O.C. Gangoly, Ragas and Raginis, I, Baroda 1948, p. 67; V.N. Bhātkhaṇḍe, A Short Historical Survey of the Music of Upper India, Bombay 1934, p. 35. But compare also: G.H. Ranade, Hindustani Music, Poona [2]1951, p. 12.

[75] Consisting of four volumes, first written in Marāthī, later translated into Hindī and published by Sangīta Kāryālaya, Hathras 1956-1957; cf. note 68.

[76] Consisting of six volumes, published by Saṅgīta Kāryālaya, Hathras 1953-1957; cf. note 68.

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CHAPTER TWO

MELODY

One of the fundamentals of a musical culture is its tone-system that is to say the system according to which it divides the octave (Sanskrit: *saptaka*, "series of seven", as against octave, "series of eight") into smaller intervals. The result of such a division is a series of notes which, if taken consecutively in regular ascent or descent, consitute the basic scale of that culture. The Indian musical culture is of special interest, since it has in course of time developed several completely different basic scales.

Musical treatises dating from the ancient period and the middle ages call the basic scales *grāma*, which literally means "village" or "community", but in a musical context denotes a "collection of intervals" (*svarasamuha*).[1] As a rule the term *grāma* is used for a basic scale from which are derived a number of secondary scales (*mūrchanā*). According to Śārṅgadeva's commentator Kallinātha[2] *grāma* is also "the foundation for pentatonic and hexatonic series of notes (*tāna*), melodic line (*varṇa*), figuration and ornamentation (*alaṃkāra*) and mode (*jāti*)".

Originally three different grāmas, viz. the *ṣaḍja*-, the *madhyama*- and the *gāndhāra-grāma*, must have existed in ancient India. The last mentioned — probably the oldest — is seldom referred to by musicologists,[3] who allege that it disappeared from the human world and is only practised in heaven, which suggests that this grāma was already out of use by the early centuries of the Christian era.

The structure of the three ancient grāmas, which are obviously named after the notes on which they start, i.e. *ṣaḍja*, *madhyama* and *gāndhāra*, is determined by measuring the intervals between the seven notes of the *saptaka*: *ṣaḍja* (abbreviated *sa*), *ṛṣabha* (*ri*), *gāndhāra* (*ga*), *madhyama* (*ma*), *pañcama* (*pa*), *dhaivata* (*dha*) and *niṣāda* (*ni*). The reader should bear in mind that in the ancient Indian theory of music *ṣaḍja*, *ṛṣabha*, etc. not only denote the notes but also the corresponding intervals *below* these notes (for example: *ṣaḍja* is not only the note *ṣaḍja* (*sa*) itself but also the interval

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[1] Compare ŚārṅSR. 1, 4, 1; NārSM. 1, 1, 49.
[2] Kallinātha on ŚārṅSR. 1, 4, 1.
[3] NārŚ. 1, 2, 6f.; NārSM. 1, 1, 54f.; ŚārṅSR. 1, 4, 4f.; MBṛh. 91.

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between the notes *niṣāda* and *ṣaḍja*, *ni-sa*). The ancient Indian intervals are "measured" in terms of micro-intervals (*śruti*, lit. "audible unit"). In order to distinguish the three types of grāma the theorists[4] determined the number of śrutis comprised in each of the seven basic intervals.

ṣaḍjagrāma		madhyamagrāma		gāndhāragrāma	
ni-sa	= 4 śrutis	ga-ma	= 4 śrutis	ri-ga	= 4 śrutis
sa-ri	= 3 śrutis	ma-pa	= 3 śrutis	ga-ma	= 3 śrutis
ri-ga	= 2 śrutis	pa-dha	= 4 śrutis	ma-pa	= 3 śrutis
ga-ma	= 4 śrutis	dha-ni	= 2 śrutis	pa-dha	= 3 śrutis
ma-pa	= 4 śrutis	ni-sa	= 4 śrutis	dha-ni	= 4 śrutis
pa-dha	= 3 śrutis	sa-ri	= 3 śrutis	ni-sa	= 3 śrutis
dha-ni	= 2 śrutis	ri-ga	= 2 śrutis	sa-ri	= 2 śrutis

In addition to the above mentioned "pure" (*śuddha*) notes *ṣaḍja*, *ṛṣabha*, etc. the following "altered" (*vikṛta*) notes or accidentals were generally recognized: the *cyuta* ("fallen", i.e. one śruti lower) notes *cyuta ṣaḍja*, *cyuta madhyama*, *triśruti* or *cyuta pañcama*, the slightly raised (i.e. one śruti higher) notes *sādhāraṇa gāndhāra* and *kaiśika niṣāda* and the raised (i.e. two śrutis higher) notes *antara gāndhāra* and *kākalī niṣāda*.

Theoretically the ancient Indian octave (*saptaka*) contained twenty-two śrutis or micro-intervals. Mathematically considered these śrutis are equal, each śruti being $^1/_{22}$ of the octave, i.e. $^1/_{22} \times 1200$ cents[5] = 54,5 cents — a micro-interval resembling the ancient Greek enharmonic quartertone of ratio $^{32}/_{31}$ = 55 cents. Calculating the ancient Indian intervals according to the 22-śruti system (1 śruti = 54,5 cents) — of course a purely theoretical calculation only mathematically valid — the *śuddha* and *vikṛta* notes corresponding to these intervals could be reconstructed as follows:

names of notes	śrutis	cents	Western equivalents
śuddha sa	0, but 4 to ś.ni	0	d
śuddha ri	3 to sa	164	e^{-36}
śuddha ga	5 to sa	273	f^{-27}
sādhāraṇa ga	6 to sa	327	f^{+27}
antara ga	7 to sa	382	$f\sharp^{-18}$
cyuta ma	8 to sa	436	$f\sharp^{+36}$

[4] For the structure of the *ṣaḍja*- and *madhyamagrāma* compare BhN. 28, 26-29 (Bombay ed.; Ghosh, Transl. II, p. 8f., ch. 28, 25-28); for the structure of the *gāndhāragrāma* cf. ŚārṅSR. 1, 4, 4f.

[5] For a division of the octave into 1200 cents compare A. J. Ellis, Tonometrical Observations on some Existing Non-harmonic Musical Scales, in: Proceedings of the Royal Society of London, 1884, p. 368-385.

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śuddha ma	9 to sa	491	g^{-9}
triśruti pa	12 to sa	655	a^{-45}
śuddha pa	13 to sa	709	a^{+9}
śuddha dha	16 to sa	873	b^{-27}
śuddha ni	18 to sa	982	c^{-18}
kaiśika ni	19 to sa	1036	c^{+36}
kākalī ni	20 to sa	1091	$c\sharp^{-9}$
cyuta sa	21 to sa	1146	$c\sharp^{+46}$
śuddha sa (tāra)	22 to sa	1200	d'

However, it is highly unlikely that equal temperament existed in ancient Indian music and much more probable that the old melodic instruments (arched harp, lute and flute) were tuned by ear, which means that only harmonics of simple frequency ratios (1 :2 :3 :4 :5 :6 :7 etc. up to 16) could have been used. Daniélou[6] has attempted to reconstruct the ancient Indian temperament by combining the ancient Greek Pythagorean temperament (which derives every interval from the cycle of fifths, $^3/_2 \times {}^3/_2 \times {}^3/_2$ etc.) with the harmonics $^6/_5$ and $^5/_4$ of just intonation. According to him the ancient Indian *śuddha* and *vikṛta* notes were tuned as follows:

names of notes	śrutis	ratios	cents	Western	equivalents
śuddha sa	0, but 4 to ś.ni	1	0	c	d
śuddha ri	3 to sa	$^9/_8$	204	d^{+4}	e^{+4}
śuddha ga	5 to sa	$^{32}/_{27}$	294	$e\flat^{-6}$	f^{-6}
sādhāraṇa ga	6 to sa	$^6/_5$	316	$e\flat^{+16}$	f^{+16}
antara ga	7 to sa	$^5/_4$	386	e^{-14}	$f\sharp^{-14}$
cyuta ma	8 to sa	$^{81}/_{64}$	408	e^{+8}	$f\sharp^{+8}$
śuddha ma	9 to sa	$^4/_3$	498	f^{-2}	g^{-2}
triśruti pa	12 to sa	$^{36}/_{25}$	631	$f\sharp^{+31}$	$g\sharp^{+31}$
śuddha pa	13 to sa	$^3/_2$	702	g^{+2}	a^{+2}
śuddha dha	16 to sa	$^5/_3$	884	a^{-16}	b^{-16}
śuddha ni	18 to sa	$^{16}/_9$	996	$b\flat^{-4}$	c^{-4}
kaiśika ni	19 to sa	$^9/_5$	1018	$b\flat^{+18}$	c^{+18}
kākalī ni	20 to sa	$^{15}/_8$	1088	b^{-12}	$c\sharp^{-12}$
cyuta sa	21 to sa	$^{243}/_{128}$	1110	b^{+10}	$c\sharp^{+10}$
śuddha sa (tāra)	22 to sa	2	1200	c'	d'

[6] A. Daniélou, The Ragas of Northern Indian Music, London 1968, p. 40f.; Idem, Tableau Comparatif des Intervalles Musicaux, Pondichéry 1958.

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For purposes of presenting the ancient Indian notes in Western notation, a d-scale is more convenient than a c-scale since, in representing the ancient Indian pure (*śuddha*) notes by naturals, it avoids accidentals (flats and sharps) in the case of the basic notes of the *ṣaḍjagrāma*.

Comparing Daniélou's calculation with the calculation according to the 22-śruti (= 1200 cents) system, the number of cents in Daniélou's intervals (to *sa*) *sādhāraṇa ga* ($^6/_5$), *antara ga* ($^5/_4$), *śuddha ma* ($^4/_3$), *śuddha pa* ($^3/_2$), *śuddha dha* ($^5/_3$) and *kākalī ni* ($^{15}/_8$) corresponds reasonably well with the ancient *śruti* system. However, the other intervals suggested by him differ widely from their ancient equivalents. For example, his *śuddha ga* ($^{32}/_{27}$ = 294 cents) is 21 cents more than the *śuddha ga* (= 273 cents) in the ancient śruti system. In my opinion Daniélou is mistaken when he takes the *śuddha ga* ($^2/_3 \times {}^{16}/_9 = {}^{32}/_{27}$ = 294 cents) as a perfect fifth (downwards) on *śuddha ni* ($^{16}/_9$ = 996 cents). The latter interval is incorrectly calculated as a perfect fourth on *śuddha ma*: $^4/_3 \times {}^4/_3 = {}^{16}/_9$ since the ancient Indian theory of consonance[7] did not regard the notes *ma* and *ni* as consonant (*saṃvādin*), which means that they were not in a perfect fourth relationship. The present writer suggests that in the ancient period the Indian musicians might have used the harmonic seventh ($^7/_4$ = 969 cents) as *śuddha ni* and the harmonic minor third ($^7/_6$ = 267 cents) as *śuddha ga*. In conformity with ancient theory these notes (i.e. *ga* and *ni*) constituted a consonant relationship, whereas *ma* and *ni* did not. The intervals $^7/_6$ and $^7/_4$ may appear to be rather low interpretations of the ancient *śuddha ga* and *śuddha ni*, but this becomes less conspicuous, if we consider Rāmāmātya's interpretation of these intervals. Applying the Pythagorean temperament, which he obviously borrowed from the Arabs, to the sixteenth century Karṇāṭak *vīṇā* (a fretted lute with four playing strings), this South Indian musicologist interpreted these notes (or rather intervals to *sa*) much lower, that is to say, *śuddha ga* as $^9/_8$ = 204 cents = $\mathrm{f}\flat^{+4}$ and *śuddha ni* as $^{27}/_{16}$ = 906 cents = $\mathrm{c}\flat^{+6}$.

The present writer proposes substituting *ri* of ratio $^{11}/_{10}$ = 165 cents, which is almost equal to the mathematically calculated three-śruti *ri* (3 × 54,5 cents = 163,5 cents), for Daniélou's *ri* ($^9/_8$ = 204 cents). Why should the ancient musicians not have used this harmonic of ratio $^{11}/_{10}$, which is an easily recognizable interval when played in the third octave by a wind instrument, for example by a flute. There are grounds for regarding this interval, *triśruti ṛṣabha*, as a very significant one in ancient Indian

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[7] Compare BhN. 28, 23 (Baroda ed.; Ghosh, Transl. II, p. 5f., ch. 28, 22f.); MBṛh. 64, p. 14; ŚārṅSR. 1, 3, 48-49; KuSR. 2, 1, 1, 214; SomRV. 1, 37 and TulSS. p. 15, l. 14.

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music. Three of these intervals of ratio $^{11}/_{10}$ (= 165 cents) constitute a fourth of 495 cents (3 × 165 cents), which very closely matches the perfect fourth $^{4}/_{3}$ (= 498 cents) as well as the nine-śruti *ma* (= 491 cents) of the 22-śruti system, the so-called *ma anāśin*, "the imperishable *ma*",[8] which was probably a fundamental note in the ancient Indian system. *Ri* of ratio $^{11}/_{10}$ (= 165 cents) can also be used as a basis for calculating the *dha* which, according to the ancient theory, was consonant, i.e. constituted a perfect fifth of ratio $^{3}/_{2}$ with *ri* (*dha* = $^{3}/_{2} \times {}^{11}/_{10} = {}^{33}/_{20}$ = 867 cents). Moreover, the ratio $^{11}/_{10}$ is of interest because it entails a division of the string into 11 equal parts, 11 being a factor of the total number of śrutis (22) existing in the octave.

But first and foremost the interval *ri* of ratio $^{11}/_{10}$ is of vital importance because without this interval Bharata's well known experiment with the two *vīṇās*[9] would not be possible. In order to prove the existence of the śruti and especially of the main śruti (*pramāṇa śruti*), which constitutes the difference between the four-śruti *pa* of the *ṣaḍjagrāma* and the three-śruti *pa* of the *madhyamagrāma*, the author of the Nāṭyaśāstra (dated first century B.C. or first century A.D.) recommends taking two *vīṇās* (most probably arched harps), one of which has fixed (*dhruva*), while the other has changeable (*cala*), tuning. First Bharata states that one should lower the *pa* of the *cala-vīṇā* one śruti. Obviously the author cannot use the śruti as a basic interval for measuring the new three-śruti *pa* whilst at the same time attemping to prove the very existence of the śruti itself. In my opinion however, Bharata's statement does not imply that the three-śruti *pa* of the *madhyamagrāma* can be tuned by subtracting one micro-interval (*śruti*) from the four-śruti *pa* of the *ṣaḍjagrāma*. Theoretically the three-śruti *pa* is indeed one śruti lower than the four-śruti *pa*. In practice, that is to say when produced on the ancient *vīṇā* (i.e. the arched harp with 7 or 9 strings[10] sounding *sa ri ga (ant. ga) ma pa dha ni (kā. ni)*) the three-śruti *pa* must have been tuned as a perfect fourth ($^{4}/_{3}$ = 498 cents) on *ri* ($^{11}/_{10}$ = 165 cents), since

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[8] Compare MBṛh. 251, p. 68, ll. 11-14; BhN. 28, 72-73 (Bombay ed.; Ghosh, Transl. II, p. 72, ch. 28, 72-73).

[9] The experiment with the two *vīṇās* is obviously meant for the arched harp type of *vīṇā*; cf. Siṃhabhūpāla on ŚārṅSR. 1, 3, 10-16, vol. I, p. 74, l. 10 and KuSR. 2, 1, 1, 95. For the experiment itself compare BhN. 28, 27 (Baroda ed. vol. IV, p. 20, l. 3-12); Ghosh, Transl. II, p. 8, l. 1-21, ch. 28, 24; MBṛh. 29, p. 5, l. 2 from the bottom to p. 6, l. 10; ŚārṅSR. 1, 3, 18-22; KuSR. 2, 1, 1, 95-111.

[10] Compare BhN. 29, 118 (Baroda ed.; Ghosh, Transl. II, p. 45, ch. 29, 120); A.K. Coomaraswamy, The Parts of a Vīṇā, in: J.A.O.S. 50 (1930); Vidvan S. Krishnaswāmi, Research on Musical Instruments of India, in: J.M.A.M. 33 (1962), p. 104; Marcel-Dubois, I.M.I., p. 80 f.; Sachs, M.I.I., p. 138 f.

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according to ancient theory the three-śruti *pa* of the *madhyama grāma* was consonant (*saṃvādin*) with *ri*, while the *śuddha pa* or four-śruti *pa* of the *ṣaḍjagrāma*, which must be tuned as a perfect fifth ($^3/_2$) on *sa*, was consonant with *sa*, but not with *ri*. If one subtracts the *madhyamagrāma pa* calculated according to this method, i.e. $^4/_3 \times {}^{11}/_{10} = {}^{22}/_{15}$, or 498 cents + 165 cents = 663 cents, from the *ṣaḍjagrāma pa* ($^3/_2$ = 702 cents), the result is the *pramāṇa* śruti of 39 cents, which is much smaller (15,5 cents) than the mathematically calculated śruti of 54,5 cents. On the other hand, since the ancient Indian musicians probably tuned their instruments solely by ear, differences of 15,5 cents are more or less negligible.

After prescribing the lowering of *pa* on the *calavīṇā* Bharata states that the other strings of this *vīṇā* should be lowered accordingly, which entails retuning the other strings in their *ṣaḍjagrāma* relationship to the new, lowered *pa*. This procedure has to be repeated three times, so that the whole experiment consists of lowering the strings of the *calavīṇā* four times. According to Bharata the twice lowered notes *ga* and *ni* of the *calavīṇā* respectively coincide with the notes *ri* and *dha* of the *dhruvavīṇā*, the thrice lowered *ri* and *dha* of the first instrument with the *sa* and *pa* of the latter and finally, the four times lowered *sa*, *ma* and *pa* of the first instrument with the *ni*, *ga* and *ma* of the latter.

It is true that two *pramāṇa* śrutis of 39 cents cannot constitute a half tone; neither can three of these śrutis constitute a minor whole tone, nor four of them a major whole tone. But assuming that the ancient Indian tuning was done by ear alone, the *pramāṇa* śruti cannot have been an accurate, mathematically correct interval. Furthermore I am inclined to think that the notes *sa*, *ri*, *ga*, *(antara ga)*, *ma*, *pa*, *dha*, *ni*, *(kākalī ni)* produced on the seven or nine open strings of the arched harp could only have represented simple frequency ratios when tuned by ear. For my part I cannot accept the frequency ratios of the ancient *śuddha ri*, *ga dha*, *ni* and *cyuta sa*, *ma* and *pa* (= *triśruti pa*) given by Daniélou. Therefore I suggest the following reconstruction of the ancient Indian notes:

names of notes	śrutis	ratios	cents	Western equivalents
śuddha sa	0, but 4 to ś.ni	1	0	d
śuddha ri	3 to sa	$^{11}/_{10}$	165	e^{-35}
śuddha ga	5 to sa	$^7/_6$	267	f^{-33}
sādhāraṇa ga	6 to sa	$^6/_5$	316	f^{+16}
antara ga	7 to sa	$^5/_4$	386	$f\sharp^{-14}$
cyuta ma	8 to sa	$^9/_7$	435	$f\sharp^{+35}$
śuddha ma	9 to sa	$^4/_3$	498	g^{-2}
triśruti pa	12 to sa	$^{22}/_{15}$	663	a^{-37}

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śuddha pa	13 to sa	$^{3}/_{2}$	702	a^{+2}
śuddha dha	16 to sa	$^{33}/_{20}$	867	b^{33}
śuddha ni	18 to sa	$^{7}/_{4}$	969	c^{31}
kaiśika ni	19 to sa	$^{9}/_{5}$	1018	c^{+18}
kākalī ni	20 to sa	$^{15}/_{8}$	1088	$c\sharp^{12}$
cyuta sa	21 to sa	$^{31}/_{16}$	1145	$c\sharp^{+45}$
śuddha sa (tāra)	22 to sa	2	1200	d′

It must have been quite easy to play the three ancient grāmas on Bharata's *citra-vīṇā*[11] — an arched harp with seven strings[12] —.

In the first place, its seven strings may have produced the following seven *śuddha* notes of the *ṣaḍjagrāma*:

svaras	sa	ri	ga	ma	pa	dha	ni	(sa)
śrutis		3 2	4	4	3	2	4	
Western notes	d	e^{-35}	f^{-33}	g^{-2}	a^{+2}	b^{-33}	c^{31}	d′

Secondly, the *madhyamagrāma* may have been produced by changing the *ṣaḍjagrāma pa* of four śrutis (709 cents) into the *madhyamagrāma pa* of three śrutis (655 cents). This lowering of *pa* could be realized by tuning the *pa* string as a perfect fourth to the *ri* string, i.e. $^{4}/_{3} \times {}^{11}/_{10}$, or 165 cents + 498 cents = 663 cents (which fairly corresponds to the mathematically calculated three-śruti *pa* of 655 cents). However, Bharata[13] states that the *madhyamagrāma* could also be produced in another way, that is to say by means of transposition (*saṃjñābheda*, lit. "changing of the names [of the notes]"). As a result of this procedure the *pa* of the *ṣaḍjagrāma* becomes the *sa* of the *madhyamagrāma* and the names of the other notes change accordingly. There is only one note which has to be altered: the two-śruti *śuddha ga* of the *ṣaḍjagrāma* has to be changed into the four-śruti *antara ga* in order to become the four-śruti *dha* of the *madhyamagrāma*, which means that the *ga* string (of ratio $^{7}/_{6}$ = 267 cents) should be tuned as a major third (of ratio $^{5}/_{4}$ = 386 cents, which differs very little from the mathematically calculated *antara ga* of 382 cents). This method of transposition (*saṃjñābheda*) is illustrated by the following chart:

śrutis		3 2	4		4	3	2	4
ṣaḍjagrāma	sa	ri	ga	a.ga	ma	pa	dha	ni	(sa)
śrutis		3	4	2	4	3	2	4	
madhyamagrāma	ma	pa		dha	ni	sa	ri	ga	(ma)
Western notes	d	e^{-35}		$f\sharp^{-14}$	g^{-2}	a^{+2}	b^{-33}	c^{-31}	d′

[11] See note 10.
[12] See note 10.
[13] BhN. 28, 36 (Bombay ed.; Ghosh, Transl. II, p. 11, ch. 28, 33 f.).

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This second method of realizing the *madhyamagrāma* was probably the one used in practice, because by this means the seven strings of the ancient *vīṇā* when played consecutively produce both the notes of the *ṣaḍjagrāma* from *sa* to *ni* as well as the notes of the *madhyamagrāma*, which according to the Nāṭyaśāstra [14] starts from *ma* and ends on *ga*, and only necessitates the retuning of the *ṣaḍjagrāma śuddha ga* into *antara ga* (= the *madhyamagrāma śuddha dha*).

Thirdly, in the same way, that is to say again by changing the names (*saṃjñābheda*) of the notes of the *ṣaḍjagrāma*, the third ancient grāma, the *gāndhāragrāma*, could be played. This grāma — probably the oldest of the three ancient basic scales as it had already become obsolete at the time of the Nāradīyā Śikṣā [15] (ca. first century B.C.) — can also be derived from the *ṣaḍjagrāma* by calling *sa* and the other notes *ga* etc., *ga* being the traditional starting note of the *gāndhāragrāma*. Since the ancient musicologists do not agree about the construction (i.e. the measurement of the intervals) of the *gāndhāragrāma*, it is not clear which of the strings has (or have) to be retuned. Śārṅgadeva [16] describes two possible reconstructions: one resulting from merely changing the names (*saṃjñābheda*) of the notes of the *ṣaḍjagrāma* without further alteration; and the other resulting from using the same method of *saṃjñābheda* with one alteration (i.e. changing *śuddha ga* of ratio $^{7}/_{6}$ into *sādhāraṇa ga* of ratio $^{6}/_{5}$, which becomes the *triśruti pa* of the *gāndhāragrāma*). These two methods can be illustrated as follows:

method 1:

ṣaḍjagrāma	sa	ri	ga	ma	pa	dha	ni	(sa)
śrutis		3 2	4	4	3	2	4	
gāndhāragrāma	ga	ma	pa	dha	ni	sa	ri	(ga)

method 2:

śrutis		3	2	4	4	3	2	4
ṣaḍjagrāma	sa	ri	ga	sādh.ga	ma	pa	dha	ni (sa)
śrutis		3	3	3	4	3	2	4
gāndhāragrāma	ga	ma		pa	dha	ni	sa	ri (ga)

However, the author of the Saṃgītamakaranda,[17] who lived at about the same time as Śārṅgadeva, defines the *gāndhāragrāma* as follows; "When

[14] BhN. 28, 26-29 (Bombay ed.; Ghosh, Transl. II, p. 8 f.; ch. 28, 25-28).
[15] Compare NārŚ. 1, 2, 6; MBṛh. 91; ŚārṅSR. 1, 4, 5; KuSR. 2, 1, 1, 296; NārSM. 1, 1, 49f.
[16] ŚārṅSR. 1, 4, 4.
[17] NārSM. 1, 1, 54.

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from *ri* and from *ma* one śruti goes to *gāndhāra* and one śruti from *pañcama* joins the śrutis of *niṣāda*, in that case Nārada speaks of *gāndhāra-grāma*", which results in the following scale:

ga $_3$ ma $_3$ pa $_3$ dha $_3$ ni $_4$ sa $_2$ ri $_4$ (ga)

This scale can also be derived from the *ṣaḍjagrāma* by means of *saṃjñābheda*, if *śuddha ga* is changed into *sādhāraṇa ga* and *śuddha pa* into *trišruti pa*:

śrutis		3	2	4		4	3	2	4	
ṣaḍjagrāma	sa	ri	ga	sādh.ga	ma	pa	pa	dha	ni	(sa)
śrutis		3	3	3	3	4		2	4	
gāndhāragrāma	ga	ma		pa	dha	ni		sa	ri	(ga)
Western notes	d	e^{-35}		f^{+16}	g^{-2}	a^{-37}		b^{33}	c^{31}	d′

Although only in two of the above mentioned reconstructions of the *gāndhāragrāma* the number of three-śruti intervals prevails (four intervals of 3 śrutis, two of 4 śrutis and one of 2 śrutis), Daniélou [18] ventures to say that the ancient *gāndhāragrāma* might have been a scale consisting of equal intervals, as is nowadays used in the classical music of Burma and Indochina. Daniélou also suggests that this equidistant scale was only suited for playing on non-fretted instruments (such as the arched harp) and hence disappeared from India when the ancient harp type of *vīṇā* was replaced by the stickzither-*vīṇā* in about the sixth century A.D. I admit that the standard interval (= 171 cents) of the equidistant scale closely resembles the ancient Indian three-śruti interval (= 165 cents, ratio $^{11}/_{10}$). I am even ready to accept that the equidistant scale may have been the forerunner of the *gāndāragrāma* and goes back to a time before the invention of the 22-śruti system, which does not permit division of the octave into seven equal intervals. Even if one constructs the *gāndhāragrāma* with six three-śruti intervals, one four-śruti interval will always remain. For example, if by using the previously mentioned method of *saṃjñābheda* one tries to derive the *gāndhāragrāma* from the *ṣaḍjagrāma* while changing three notes (and the six adjoining intervals) of the latter, namely *śuddha ga* into *sādhāraṇa ga*, *śuddha pa* into *trišruti pa* and *śuddha ni* into *kaišika ni* — an alteration no ancient author mentions — one is left with one four-śruti interval, that is to say the interval *pa-dha* = *ni-sa* of the *gāndhāragrāma*:

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[18] Musique du Cambodga et du Laos, Pondichéry 1957, p. 3 f.

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śrutis	3	2	4		4	3	2	4			
ṣaḍjagrāma	sa	ri	ga	sā.ga	ma	pa	pa	dha	ni	kai.ni	(sa)
śrutis	3		3	3	3	4		3		3	
gāndhāragrāma	ga	ma		pa	dha	ni		sa		ri	(ga)

Since the ancient *gāndhāragrāma* did not fit into the 22-śruti system described in the Nāṭyaśāstra, it had probably already fallen into disuse before the first century B.C., that is to say long before the arched harp (which is still mentioned in the Nāṭyaśāstra) was replaced by the stickzither-*vīṇā*. Disagreeing with Daniélou who suggests that the equidistant *gāndhāragrāma* was not suitable for being played on the new type of *vīṇā*, I think it much more likely that it was not the *gāndhāragrāma* — already obsolete before the new *vīṇā* was introduced — but the unequal whole tones (of 3 and 4 śrutis) of the *ṣaḍja-* and *madhyamagrāma* that caused difficulties when produced on a stringed instrument (stickzither-*vīṇā*) which was played in the same way as a lute i.e. by shortening the strings. Moreover, I very much doubt whether any of the ancient grāmas with their unequal whole tones of 4 and 3 śrutis could ever have been played on the thirteenth century fretted *vīṇā*.

Śārṅgadeva's descriptions of the *bṛhatī-*, *madhyamā-* and *laghvīkinnarī vīṇās*, and more especially his measurements of distances between the fixed frets of these *vīṇās*,[19] go to prove that the temperament of stringed instruments had changed since ancient times.

The following table (on p. 23) shows the difference between Śārṅgadeva's temperament of the three *kinnarī vīṇās*, the interval ratios of which can be derived from the measurements of the fret distances mentioned by him, and the ancient Indian temperament.

The notes of the three *kinnarī vīṇās* appear to be much higher than their ancient equivalents. In the case of the *bṛhatīkinnarī vīṇā* the notes seem to have moved from their original position to the next higher śruti. Especially the fourth (*ma*) and the fifth (*pa*) have got such unnatural, high pitches, that one is inclined to think that Śārṅgadeva did not start his scales from the ancient *śuddha ṣaḍja*, but from the ancient *cyuta ṣaḍja*,[20] which is one śruti (i.e. approximately 55 cents) lower than *śuddha ṣaḍja*, so that all intervals to *sa* become unusually wide and the corresponding notes unusually high. On that assumption 50 and 40 cents could be respectively subtracted

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[19] ŚārṅSR. 6, 294-299; 312-316; 321-325.
[20] Compare p. 15 of this chapter.

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ancient mathematic intervals			Śārṅgadeva's kinnarī-vīṇā fret distances			harmonic intervals			
names	śruti	cents	bṛhatī-k.-vīṇā	madhy.-k.-vīṇā	laghvī-k.-vīṇā	ratio	cents	ratio	cents
śuddha sa	0	0	0	0	0	$^{1}/_{1}$ =	0		
śuddha ri	3	164				$^{11}/_{10}$ =	165		
	4	218	196	203	239	$^{9}/_{8}$ =	204	$^{8}/_{7}$ =	231
sādhāraṇa ga	6	327				$^{6}/_{5}$ =	316		
antara ga	7	382	365	359	387	$^{5}/_{4}$ =	386		
śuddha ma	9	491			518	$^{4}/_{3}$ =	498		
	10	546	547	542					
śuddha pa	13	709		726	718	$^{3}/_{2}$ =	702		
	14	764	750						
śuddha dha	16	873				$^{33}/_{20}$ =	867		
	17	927	933	904	905	$^{27}/_{16}$ =	906		
śuddha ni	18	982			1007	$^{7}/_{4}$ =	969	$^{16}/_{9}$ =	996
kaiśika ni	19	1036	1053	1034		$^{20}/_{11}$ =	1035	$^{11}/_{6}$ =	1049
śuddha sa	22	1200	1200	1200	1200	$^{2}/_{1}$ =	1200		

bṛhatī-kinnarī-vīṇā intervals minus 50 cents:

sa	= 0 cents		$^{1}/_{1}$ =	0 cents	
ri	= 146 cents	Al-Fārābi's 3rd fret	=	145 cents	
ga	= 315 cents		$^{6}/_{5}$ =	316 cents	
ma	= 497 cents		$^{4}/_{3}$ =	498 cents	
pa	= 700 cents		$^{3}/_{2}$ =	702 cents	
dha	= 883 cents		$^{5}/_{3}$ =	884 cents	
ni	= 1003 cents		$^{16}/_{9}$ =	996 cents	
sa	= 1200 cents		$^{2}/_{1}$ =	1200 cents	

madhyamā-kinnarī-vīṇā intervals minus 40 cents:

sa	= 0 cents		
ri	= 163 cents	$^{11}/_{10}$ =	165 cents
ga	= 319 cents		
ma	= 502 cents		
pa	= 686 cents		
dha	= 864 cents	$^{33}/_{20}$ =	867 cents
ni	= 994 cents		
sa	= 1200 cents		

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from all the *bṛhatī-* and *madhyamākinnarī vīṇā* intervals to obtain more natural intervals.

As a result of the 50 cents subtraction the *bṛhatīkinnrī vīṇā* intervals *ga*, *ma*, *pa*, *dha* and *ni* now come very near to the frequency ratios $^{6}/_{5}$ = 316 cents, $^{4}/_{3}$ = 498 cents, $^{3}/_{2}$ = 702 cents, $^{5}/_{3}$ = 884 cents and $^{16}/_{9}$ = 996 cents, respectively. Only *ri*, which according to Śārṅgadeva was an interval of 196 cents (and therefore approaches ratio $^{9}/_{8}$ = 204 cents), has now become a very small interval of 146 cents. However, it is interesting to note that this interval is almost identical with an Arabian interval, namely with Al-Fārābi's third fret of the lute (145 cents).[21]

By subtracting 40 cents the *madhyamākinnarī-vīṇā* intervals *ri*, *ga*, *ma* and *dha* approach the ratios $^{11}/_{10}$ = 165 cents, $^{6}/_{5}$ = 316 cents, $^{4}/_{3}$ = 498 cents and $^{33}/_{20}$ = 867 cents, which according to the present writer respectively represent the ancient *śuddha ri*, *sādhāraṇa ga*, *śuddha ma* and *śuddha dha*. However the *ni* of the *madhyamākinnarī vīṇā*, which has become an interval of 994 cents (approaching ratio $^{16}/_{9}$ = 996 cents), does not fit into this ancient series of harmonic intervals,[22] and the *pa* has now become a rather unharmonic fifth of 686 cents.

In the case of the *laghvīkinnarī vīṇā* a subtraction of 40 to 50 cents would give a very low fourth (478 to 468 cents) and fifth (678 to 668 cents). Therefore one might take the intervals of the *laghvīkinnarī vīṇā* as they are handed down by Śārṅgadeva, i.e. without applying any subtraction, and compare them to the nearest harmonic intervals:

laghvīkinnarī-vīṇā intervals			nearest harmonic intervals		
sa	=	0 cents	$^{1}/_{1}$	=	0 cents
ri	=	239 cents	$^{8}/_{7}$	=	231 cents
ga	=	387 cents	$^{5}/_{4}$	=	386 cents
ma	=	518 cents	$^{4}/_{3}$	=	498 cents
pa	=	718 cents	$^{3}/_{2}$	=	702 cents
dha	=	905 cents	$^{27}/_{16}$	=	906 cents
ni	=	1007 cents	$^{16}/_{9}$	=	996 cents
sa'	=	1200 cents	$^{2}/_{1}$	=	1200 cents

Unlike the scales of the other two *vīṇās* this scale has a major third (= ancient *antara ga*) and a very high major second (*ri*) of 239 cents.

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[21] Compare L. Manik, Das arabische Tonsystem im Mittelalter, Leiden 1969, p. 42, Tabelle 2.

[22] Compare the ancient Indian consonant theory and Daniélou's interpretation of the ancient Indian *ni* of ratio $^{16}/_{9}$ on p. 15 of this chapter.

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It seems to me that the smaller measurements of this instrument have increased the inaccuracies in the calculation of the fret distances.

Contemporary Arabic temperaments probably influenced Śārṅgadeva's experimental *kinnarī-vīṇā* temperaments. He may have known the lute temperament of Al-Fārābi († 950)[23] and have tried to transmit some Arabic lute intervals to the Indian fretted *vīṇā*. So the *bṛhatī-* and *madhyamākinnarī-vīṇā* intervals *ri* of respectively 196 and 203 cents were possibly imitations of the Arabic index finger fret (i.e. of the fifth fret, named *sabbāba*) of ratio $^{9}/_{8}$ = 204 cents. Similarly, the *bṛhatī-* and *madhyamākinnarī-vīṇā ga* of respectively 365 and 359 cents more or less correspond to the Arabic middle-finger fret (i.e. the eighth fret, the so-called Zalzal's middle-finger) of ratio $^{27}/_{22}$ = 355 cents. On the Arabic lute as well as on the Indian fretted *vīṇā* the little finger may have produced the fourth of ratio $^{4}/_{3}$ = 498 cents, remembering however that this ratio differs from Śārṅgadeva's calculation of this interval (without subtraction) on the three *kinnarī vīṇās*. The Arabic ringfinger (i.e. the ninth fret, named *binsir*) of ratio $^{81}/_{64}$ = 408 cents was apparently not used in Śārṅgadeva's *vīṇā* technique.[24] Nevertheless though Śārṅgadeva is silent about the application of that finger, it can be assumed that Indian *vīṇa* players used it to produce the *antara ga* of ratio $^{5}/_{4}$ = 386 cents.

The above mentioned thirteenth century measurement of the fret distances on three stickzither-*vīṇās* would seem to justify the conclusion that Śārṅgadeva was trying to adjust the ancient basic scales to the new fretted *vīṇā*, just as in Europe several attempts were made to find a temperament to suit the fretted lutes and keyboard instruments. But whereas in Europe the new sixteenth century harmonic style with its many modulations (change of tonic) inevitably led to equal temperament, India had no need of such a temperament since its music never deviated from its primary melodic rāga system based on a fixed tonic, variety being achieved not through modulation but through the vast diversity in melodic patterns (*rāga*).

When describing the tuning of his *śuddha-mela-vīṇā*, the sixteenth century Indian musicologist Rāmāmātya, who reorganized Indian music and laid the foundations for the modern Karṇāṭak rāga system, is obviously referring to the Pythagorean temperament handed down by Arabian theorists.[25] In determining the relation of the notes to be fixed on the six frets of the

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[23] Compare Manik, o.c., p. 42.
[24] ŚārṅSR. 6, 253 f.
[25] Compare Manik, o.c., p. 66, fig. 18 and p. 56, fig. 17.

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four melody strings of that *vīṇā* he uses the *svayambhu* principle,[26] i.e. the natural consonance of the harmonic intervals $^{3}/_{2}$ (perfect fifth) and $^{4}/_{3}$ (perfect fourth) which according to ancient Indian theory are consonant (*saṃvādin*). This means that all the intervals contained in Rāmāmātya's scale could be calculated as a power of ratio $^{3}/_{2}$ (or $^{4}/_{3}$). The result of this so-called Pythagorean temperament is a scale consisting of unequal half tones, that is to say of diatonic half tones of 90 cents (= Pythagorean limma of ratio $^{256}/_{243}$) and of chromatic half tones of 114 cents (= Pythagorean apotome of ratio $^{2187}/_{2048}$), which represent the twelve *śuddha* and *vikṛta* notes of the sixteenth century South Indian system:

names of notes	ratios	cents	cents	Western equivalents
śuddha sa	1	0	90	d
śuddha ri	$^{256}/_{243}$	90	114	e♭ -10
śuddha ga	$^{9}/_{8}$	204	90	e +4
sādhāraṇa ga	$^{32}/_{27}$	294	114	f -6
cyuta ma	$^{81}/_{64}$	408	90	f♯ +8
śuddha ma	$^{4}/_{3}$	498	114	g -2
cyuta pa	$^{729}/_{512}$	612	90	g♯ +12
śuddha pa	$^{3}/_{2}$	702	90	a +2
śuddha dha	$^{128}/_{81}$	792	114	b♭ -8
śuddha ni	$^{27}/_{16}$	906	90	b +6
kaiśika ni	$^{16}/_{9}$	996	114	c -4
cyuta sa	$^{243}/_{128}$	1110	90	c♯ +10
śuddha sa (tāra)	2	1200		d'

In this sixteenth century scale the ancient minor whole tones of three śrutis (*sa-ri*, *ma-cy.pa* and *pa-dha*) are replaced by half tones of 114 or 90 cents; the ancient two-śruti intervals (*ri-śu.ga*, *sā.ga-cy.ma*, *dha-śu.ni* and *kai.ni-cy.sa*) by half tones of 114 cents, while the ancient one-śruti intervals (*śu.ga-sā.ga*, *cy.ma-śu.ma*, *cy.pa-śu.pa*, *śu.ni-kai.ni* and *cy.sa-śu.sa*) are represented by half tones of 90 cents.

The following table shows how Rāmāmātya fixed the theoretical intervals (L = limma of 90 cents and A = apotome of 114 cents) of his so-called *svayambhu* ("natural") temperament on the six frets and the four melody strings of his *śuddha-mela-vīṇā*:

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[26] Compare RāmSM. 3, 18-62.

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fret number	0	1	2	3	4	5	6
fret distance (cents)	90		114	90	90	114	90
anumandra sa string	sa	L ri	A ga	L sā.ga	A cy.ma	L ma	A cy.pa
anumandra pa string	pa	L dha	A ni	L kai.ni	A cy.sa	L sa	L ri
mandra sa string	sa	L ri	A ga	L sā.ga	A cy.ma	L ma	A cy.pa
mandra ma string	ma	A cy.pa	L pa	L dha	A ni	L kai.ni	A cy.sa

Although the interval *ma-cy.pa* is theoretically an apotome (A = 114 cents) in Rāmāmātya's *svayambhu* temperament, the note *cyuta pañcama* is tuned slightly lower when produced on the *vīṇā*, since it is fixed on the first fret (90 cents from the bridge, *meru*) of the *mandra ma* string and on the sixth fret (90 cents from fret number 5) of the *anumandra sa* and *mandra sa* strings. Similarly *cyuta sa* of the *mandra ma* string is fixed on the sixth fret, although the interval *kai.ni-cy.sa* is theoretically an apotome (A = 114 cents) in the *svayambhu* temperament. Rāmāmātya considers it permissible to tune *cyuta sa* and *cyuta mā* a little lower, so that these notes coincide with the *kākalī ni* and the *antara ga* respectively, because the difference is almost negligible (i.e. 114 cents — 90 cents = 24 cents, representing the Pythagorean comma). Rāmāmātya's statement implies that also *cyuta ma* of the *anumandra* and *mandra sa* strings and *cyuta sa* of the *anumandra pa* string, fixed on the fourth fret, were tuned rather low (i.e. to make an interval of 90 instead of 114 cents with the preceding fret). This leads to the conclusion that the Pythagorean intervals of 114 and 90 cents between the third and fourth and the fourth and fifth frets must have been interchanged. This method of placing the frets has one disadvantage: the note *śuddha ni* of the *mandra ma* string becomes too low, i.e. 24 cents (the Pythagorean comma) lower than its equivalent in the theoretical *svayambhu* temperament.

Rāmāmātya's *svayambhu* temperament, as well as its realization on the *vīṇā*, was accepted by the later sixteenth century Karṇāṭak musicologists Puṃḍarīkavitthala (the author of the Ṣaḍrāgacandrodaya)[27] and Śrīkaṇṭha (the author of the Rasakaumudī)[28] who, after migrating to the North, most probably introduced this temperament in Hindustānī music. Somanātha, a South Indian author from Andhra Pradesh, also refers to this temperament in the second chapter of his Rāgavibodha (1609), but in the second list of melas at the end of that work he mentions seventeen notes which remind us of the Arabic 17-tone system of Safī-al-Dīn († 1294).[29] Whereas in South

[27] See V. N. Bhātkhaṇḍe, A Comparative Study of Some of the Leading Music Systems of the 15th, 16th, 17th & 18th centuries, Bombay [1]1941, p. 47 f.

[28] ŚrīRK. 2, 27-46.

[29] SomRV. 2, 19-27, esp. 33; cf. also Manik, o.c., p. 56.

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India Rāmāmātya's *svara* nomenclature (i.e. names of the notes) as well as part of his *svayambhu* temperament has been preserved up to the present day, a new system was developed in the North towards the end of the seventeenth century.

Although we do not know whether Ahobala or Hṛdayanārāyaṇadeva invented the new temperament, and which of these two musicologists was the first to change the names of the notes, the new system is clearly described in Hṛdayanārāyaṇadeva's Hṛdayaprakāśa as well as in Ahobala's Saṃgītapārijāta. Both these authors give accurate measurements for the division of the strings in order to determine the position of twelve notes in the saptaka, and thus enable us to calculate the exact frequency ratios of these notes:[30]

notes	ratios	cents	Western equivalents
śuddha sa	1	0	d
komala ri	$^{27}/_{25}$	133	e♭$^{+33}$
śuddha ri	$^{9}/_{8}$	204	e^{+4}
śuddha ga	$^{6}/_{5}$	316	f^{+16}
tīvra(tara)ga	$^{24}/_{19}$ ($^{81}/_{64}$)	404 (408)	f♯$^{+4(8)}$
śuddha ma	$^{4}/_{3}$	498	g^{-2}
tīvratara ma	$^{36}/_{25}$ ($^{486}/_{337}$)	631 (634)	g♯$^{+31(34)}$
śuddha pa	$^{3}/_{2}$	702	a^{+2}
komala dha	$^{18}/_{11}$	853	b^{-47}
śuddha dha	$^{12}/_{7}$ ($^{27}/_{16}$)	933 (906)	b$^{+33(6)}$
śuddha ni	$^{9}/_{5}$	1018	c^{+18}
tīvra(tara)ni	$^{36}/_{19}$ ($^{27}/_{14}$)	1107 (1137)	c♯$^{+7(37)}$
śu.sa (tāra)	2	1200	d′

The numbers placed in brackets in this table represent Bhātkhaṇḍe's interpretation[31] of the relevant Sanskrit texts.

The above mentioned North Indian notes *śuddha ri* ($^{9}/_{8}$) and *śuddha dha* ($^{27}/_{16}$) correspond with the South Indian notes *śuddha ga* and *śuddha ni* respectively. The North Indian *komala ri* and *komala dha* are tuned much higher than their South Indian equivalents *śuddha ri* and *dha* and approach the ancient Indian *śuddha* (= *triśruti*) *ri* and *dha* of ratio $^{11}/_{10}$ (= 165 cents) and ratio $^{33}/_{20}$ (= 867 cents) respectively. The North Indian *tīvra ga* and *tīvra ni* differ only slightly in pitch from the theoretically calculated (i.e.

[30] Compare AhSP. p. 40 f., verses 314-332; HṛdHP. p. 2 f.
[31] Bhātkhaṇḍe, Comparative Study, p. 28 f.

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calculated according to the *svayambhu* temperament) South Indian *cyuta ma* and *cyuta sa*, which however must have been pitched a little lower (24 cents) when played on the *vīnā*, since Rāmāmātya states that these notes coincide with *antara ga* and *kākalī ni* respectively.[32] The seventeenth century North Indian *śuddha ga* ($^{6}/_{5}$) and *śuddha ni* ($^{9}/_{5}$) are comparable with the ancient *sādhāraṇa ga* and *kaiśika ni* respectively, but are a little (22 cents) higher in pitch then their contemporary South Indian equivalents (i.e. Rāmāmātya's *sādhāraṇa ga* and *kaiśika ni*). The intervals *ma* ($^{4}/_{3}$) and *pa* ($^{3}/_{2}$), which were most probably also used in the ancient period, are obviously common to both North and South Indian music from the sixteenth century onwards. Both the seventeenth century North Indian *tīvratama ma* ($^{36}/_{25}$ = 631 cents) and the sixteenth century South Indian *cyuta pa* ($^{729}/_{512}$ = 612 cents, on the *viṇā* 588 cents) are low interpretations of the ancient three-śruti *pañcama* (= 12 śrutis from *sa* = 655 cents, or $^{4}/_{3} \times {}^{11}/_{10} = {}^{22}/_{15}$ = 663 cents).

However, it should be borne in mind that all the above mentioned ratios only represent theoretical intervals. Even if a particular string division is indicated as given by Ahobala and Hṛdayanārāyaṇadeva, the intervals are not absolutely fixed but are finally determined by the performing musician. As a result of the traditional Indian technique of deflecting (i.e. pulling sidewards) the strings even on instruments with fixed frets (like the North Indian *bīn*) the pitch of the basic notes used in the various rāgas depends solely on the instrumentalist's individual interpretation and may even differ in the same rāga from one performance to the other. Since the art of improvisation and the performer's individual interpretation have always been the most important aspects of Indian music, it is unwise to base rigid conclusions on statements found in ancient as well as in modern theoretical treatises on music. Nevertheless modern Indian musical practice does use intervals[33] from Pythagorean ($^{3}/_{2}$, $^{4}/_{3}$, $^{9}/_{8}$, $^{81}/_{64}$, $^{27}/_{16}$, etc.) and just temperament ($^{10}/_{9}$, $^{6}/_{5}$, $^{5}/_{4}$, $^{5}/_{3}$, $^{9}/_{5}$, $^{15}/_{8}$). Although during latter centuries — perhaps even since the thirteenth century — the frets of the South Indian *viṇā* have been fixed,[34] definite harmonic intervals of simple

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[32] Compare RāmSM. 3, 64-72.

[33] Compare A. Daniélou, Introduction to the Study of Musical Scales, London 1943, p. 154; Idem, The Rāgas of Northern Indian Music, p. 40 f.; E. Clements, Introduction to the Study of Indian Music, London 1913 (Allahabad 1960, 1967), App. A, which shows the different intonations in the rāgas *yaman*, *bhairavī* and *kāfī*. Compare also N.K. Bose, Melodic Types of Hindustan, Bombay 1960. This author calculates the intervals of the notes used in the different rāgas, while using microtones of 22.6 cents (i.e. $^{1}/_{53}$ of the octave).

[34] Compare ŚārṅSR. 6, 262; S. Ramanathan, Raghunātha Mela Vīṇā, in: Journal of the Music Academy Madras 35 (1964), p. 145.

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ratios such as those mentioned by Ramanathan and other musicologists[35] are scarcely recognizable (by the human ear at least), since the executing artist usually buries the main notes of a melody under a heap of grace notes (i.e. slides, slurs, shakes, etc.).

Therefore the following table, which names the Indian notes used in various periods and gives their Western equivalents in equal temperament (the differences being indicated in cents), merely provides a survey of the historical development of the purely theoretical basic notes referred to by musicologists.

names of notes	ancient śruti system	ancient harmonic system	16th century Karṇāṭak system	modern Karṇāṭak system	17th century Hindustānī system	modern Hindustānī system
śuddha sa	= d	d	d	d	śu.sa = d	śu.sa = d
śuddha ri	= e^{-36}	e^{-35}	$e\flat^{-10}$	$e\flat^{+12}$	kom.ri = $e\flat^{+33}$	kom.ri = $e\flat^{+12(+33)}$
śuddha ga	= f^{-27}	f^{-33}	$f\flat^{+4}$	$f\flat^{+4(-18)}$	śu.ri = e^{+4}	śu.ri = $e^{+4(-18)}$
sādhāraṇa ga	= f^{+27}	f^{+16}	f^{-6}	$f^{-6(+16)}$	śu.ga = f^{+16}	kom.ga = $f^{+16(-6)}$
antara ga	= $f\sharp^{-18}$	$f\sharp^{-14}$	$f\sharp^{-16}$	$f\sharp^{-14}$		śu.ga = $f\sharp^{-14}$
cuyta ma	= $f\sharp^{+36}$	$f\sharp^{+35}$	$f\sharp^{+8}$		tīv.ga = $f\sharp^{+4}$	
śuddha ma	= g^{-9}	g^{2}	g^{2}	g^{2}	śu.ma = g^{-2}	śu.ma = g^{-2}
trrišruti pa	= a^{-45}	a^{37}	$g\sharp^{-12}$	$g\sharp^{-10(+10)}$	tīv.ma = $g\sharp^{+31}$	tīv.ma = $g\sharp^{-10(-3)}$
śuddha pa	= a^{+9}	a^{+2}	a^{+2}	a^{+2}	śu.pa = a^{+2}	śu.pa = a^{+2}
śuddha dha	= b^{-27}	b^{-33}	$b\flat^{-8}$	$b\flat^{+14}$	kom.dha = b^{-47}	kom.dha = $b\flat^{+14}$
śuddha ni	= c^{18}	c^{-31}	b^{+6}	$b^{+6(-16)}$	śu.dha = b^{+33}	śu.dha = $b^{-16(+6)}$
kaišika ni	= c^{+36}	c^{+18}	c^{-4}	$c^{-4(+18)}$	śu.ni = c^{+18}	kom.ni = $c^{+18(-4)}$
kākalī ni	= $c\sharp^{9}$	$c\sharp^{-12}$	$c\sharp^{-14}$	$c\sharp^{-12}$		śu.ni = $c\sharp^{12}$
cyuta sa	= $c\sharp^{+46}$	$c\sharp^{+45}$	$c\sharp^{+10}$		tīv.ni = $c\sharp^{+7}$	

This table shows that the ancient nomenclature has been preserved in Karṇāṭak musical theory, although the pitch of several of these notes has changed in course of time. Only the tonic (*sa*), the fourth (*ma*) and the fifth (*pa*) appear to have retained constant values. The ancient harmonic major third (*antara ga*) and major seventh (*kākalī ni*) are still found in modern Karṇāṭak and Hindustānī music, but these intervals were interpreted in a different way during the sixteenth and seventeenth centuries. Two

[35] Ramanathan, o.c., p. 146; C.S. Ayyar, Grammar of Karṇāṭak Music, Madras(?) [1]1939, [2]1951; P. Sambamoortby, South Indian Music, Book 1, Madras [7]1966, ch. 3.

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interpretations of the minor third (*sādhāraṇa ga*) and the minor seventh (*kaiśika ni*), that is to say, the ancient and the sixteenth century Karṇāṭak interpretation, are still common in modern Hindustānī and Karṇāṭak music. The ancient *śuddha ri, ga, dha* and *ni* however changed considerably in course of time. *Suddha ga* and *ni* were lowered almost a semitone, while the *śuddha ri* and *dha* were respectively lowered 32 and 53 cents. The ancient *cyuta sa* (or *cyutaṣaḍja ni*) and *cyuta ma* (or *cyutamadhyama ga*), referred to by the thirteenth century author Śārṅgadeva, disappeared after the sixteenth century when Rāmāmātya replaced them by *kākalī ni* and *antara ga* respectively. Only the seventeenth century North Indian *tīvra ni* and *tīvra ga* remind us of the ancient *cyuta* notes, because their pitch is higher than their contemporary and modern Karṇāṭak equivalents *kākalī ni* (= modern Hindustānī *śuddha ni*) and *antara ga* (= modern Hindustānī *śuddha ga*). The ancient *triśruti pa*, though considerably lowered in course of time, is represented in modern Karṇāṭak and Hindustānī music by *prati ma* and *tīvra ma* respectively. According to the eighteenth century musicologist Tulaja[36] the ancient *madhamagrāma pañcama* (= *triśruti pa* or *cyutapañcama ma*) was commonly known as *varālimadhyama*, since it was a characteristic note in the rāga *varāli*.

Considering the twelve (or fourteen) Indian basic notes, the temperament and nomenclature of which have now been elaborately discussed from the historical point of view, it becomes clear that the Indian basic scales — the ancient *grāmas*, the modern Karṇātak *melas* or the modern Hindustānī *ṭhāṭs* — never contained all the twelve (or fourteen) pure (*śuddha*) and altered (*vikṛta*) notes of the octave (*saptaka*) in one and the same scale. Generally seven notes — in the ancient times sometimes even a smaller number (i.e. five in the grāmarāga *pañcama* and six in the grāmarāga *niṣāda*) — constituted a basic scale. Since explanatory theory invariably follows in the steps of musical practice, the theoretical basic scales (*grāmas*, *melas*, *ṭhāṭs*) must have been abstracted from pre-existing melodies, so that the ancient Indian *ṣaḍja-*, *madhyama-* and *gāndhāragrāma* were scale-abstracts drawn from well known melodic patterns (*rāgas*). The oldest literary sources[37] do indeed refer to such melodies or melodic patterns, called *grāmarāgas*.

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[36] TulSS. p. 69.

[37] NārŚ. I, 4, 5-11; BhN. 32, 435 f. (Bombay ed.); Mārkaṇḍeyapurāṇa 23, 49-61; A. Daniélou, Textes des Purāṇas sur la Théorie Musicale, vol. I, p. 106 f.; S. Prajñānānanda, Analysis of Music in the Mārkaṇḍeyapurāṇa, in: J.M.A.M. 29 (1958), p. 135; the Kudumiāmālai Rock Inscriptions, caused to be inscribed by Rāma Varman Maharājā; R. Sathyanarayana, The Kudimiyamalai Inscription on Music, Shri Varalakshmi Academy Publication Series no. 3, Mysore 1957.

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Mostly the following seven grāmarāgas are referred to: *ṣaḍjagrāma*, *madhyamagrāma*, *pañcama-auḍava*, *niṣāda-ṣāḍava*, *sādhārita*, *kaiśika* and *kaiśikamadhyama*. The author of the Nāṭyaśāstra, who mentions only the five grāmarāgas to be used in ancient Indian drama,[38] calls them *gānas*, "songs". *Gāna* is a term that is elsewhere[39] in the Nāṭyaśāstra clearly defined as a vocal composition accompanied by musical instruments: *pūrṇasvaram vādyavicitravarṇatristhānagaṃ trilayaṃ trimārgagaṃ | raktaṃ samaślakṣṇam alaṃkṛtaṃ ca mukhaṃ praśastaṃ madhuraṃ ca gānam*, "That is a song, which uses all the notes, is accompanied by instruments (*vādya*), has variegated melodic lines (*varṇa*), three registers (*sthāna*), three speeds (*laya*), three styles (*mārga*, depending on the division of the main unit of time into smaller time units), [sounds] beautiful (*rakta*, due to the combination of flute (*veṇu*) and harp (*vīṇā*)), is balanced (*sama*, the different beats being indicated by the positions of the hands), smooth (*ślakṣṇa*, due to its graceful rhythm), contains ornamentations (*alaṃkṛta*, i.e. adorned with grace notes, *ālaṃkāras*), is praiseworthy, excellent and sweet (*madhura*, on account of its graceful words)".[40]

The theoretical basic scales *ṣaḍja-* and *madhyamagrāma* may have developed from the ancient songs (*gāna*) or melodies (*grāmarāga*). The origin of the mysterious *gāndhāragrāma*, however, remains ambiguous.

In addition to these grāmas, ancient theory developed a system of secondary octave scales (*mūrchanās*). Taking in turn one of the seven notes of the three grāmas in descending order as the starting point for a new scale, one arrives at twenty-one secondary scales, that is to say seven in each of the three grāmas:

ṣaḍjagrāma-mūrchanās

uttaramandrā	sa ri ga ma pa dha ni
rajanī	ni sa ri ga ma pa dha
uttarāyatā	dha ni sa ri ga ma pa
śuddhaṣaḍjā	pa dha ni sa ri ga ma
matsarīkṛtā	ma pa dha ni sa ri ga
aśvakrāntā	ga ma pa dha ni sa ri
abhirudgatā	ri ga ma pa dha ni sa

[38] BhN. 32, 435-436 (Bombay ed.); Ghosh, Transl. II, p. 156, ch. 32, 485-486.

[39] BhN. 32, 441 (Bombay ed.); Ghosh, Transl. II, p. 156, ch. 32, 492.

[40] For the translation of the Sanskrit terms *rakta*, *sama*, *ślakṣṇa*, *alaṃkṛta*, *madhura* compare the definitions of NārŚ. 1, 3, 1; cf. also Present Writer, Dattilam, p. 174 f.

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madhyamagrāma-mūrchanās

sauvīrī	ma pa dha ni sa ri ga
harināśvā	ga ma pa dha ni sa ri
kalopanatā	ri ga ma pa dha ni sa
śuddhamadhyā	sa ri ga ma pa dha ni
mārgī	ni sa ri ga ma pa dha
pauravī	dha ni sa ri ga ma pa
hṛṣyakā	pa dha ni sa ri ga ma

gāndhāragrāma-mūrchanās

nāndī	ga ma pa dha ni sa ri
ālāpā (or: balāyā)	ri ga ma pa dha ni sa
sukhā	sa ri ga ma pa dha ni
citrāvatī	ni sa ri ga ma pa dha
citrā	dha ni sa ri ga ma pa
sumukhī	pa dha ni sa ri ga ma
viśālā	ma pa dha ni sa ri ga

Some authors[41] only mention the mūrchanās of the *ṣaḍja-* and *madhyamagrāma*; others,[42] obviously recording the older tradition of the Nāradīyā Śikṣā, also refer to the mūrchanās of the *gāndhāragrāma*. In the Nāradīyā Śikṣā itself five mūrchanās of the *ṣaḍjagrāma*, viz. *uttaramandrā*, *rajanī*, *uttarāyatā*, *aśvakrāntā* and *abhirudgatā*, and two of the *madhyamagrāma* are called the mūrchanās of the seers (*ṛṣīṇām*).[43] These seven are also considered to be the common (*laukika*)[44] mūrchanās. The remaining mūrchanās of the *ṣaḍja-* and *madhyamagrāma* are called mūrchanās of the fathers (*pitṝṇām*),[45] while the *gāndhāragrāma* mūrchanās are referred to as mūrchanās of the gods (*devānām*).[46] In contrast with later authors the author of the Nāradīyā Śikṣa takes the starting notes of the mūrchanās in ascending order.

Ancient tradition defines *mūrchanā* as the ascent and descent of a series of seven notes produced consecutively,[47] "due to which the melody (*rāga*) assumes its definite form" (lit.: "grows"), *yena rāgo mūrchate*.[48] As appears

[41] BhN. 28, 27-32 (Baroda ed.); MBṛh. 96-101; KuSR. 2, 1, 1, 316-319.
[42] ŚārṅSR. 1, 4, 10 f.; 1, 4, 25 f.; NārSM. 1, 1, 90-96.
[43] NarŚ. 1, 2, 11-13.
[44] NārŚ. 1, 2, 14.
[45] NārŚ. 1, 2, 10.
[46] NārŚ. 1, 2, 9.
[47] Compare MBṛh. 94, p. 22, l. 1-4; ŚārṅSR. 1, 4, 9.
[48] MBṛh. 94, p. 22 l. 3.

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from Śārṅgadeva's description of rāgas most of these have one characteristic mūrchanā, the starting note of which generally coincides with one of the most important notes, i.e. the dominant (*aṃśa*), the initial note (*graha*) or the final note (*nyāsa*), in the relevant rāga.

Alongside the basic scales (*grāma*) and their secondary scales (*mūrchanās*) ancient theory developed another abstraction, the basic mode (*jāti*, lit.: "origin", but also a universal term for "category", "class", "genus"), which can be regarded as covering all the modal aspects of a particular melody. In ancient times ten modal aspects, the "essentials" (*lakṣaṇa*), were generally acknowledged, viz. the predominant note (*aṃśa*), the initial note (*graha*), the final note (*nyāsa*), the secondary final note (*apanyāsa*) terminating a section (*vidārī*) of a song, the highest note (*tāra*), the lowest note (*mandra*), the prevalence (*bahutva*) or the rareness (*alpatva*) of a particular note, and the hexatonic (*ṣāḍava*) or pentatonic (*auḍava*) structure. Śārṅgadeva[49] mentions three additional essentials: the final note of the first section of a song (*saṃnyāsa*), the final note of a verbal theme or text unit (*pada*) in a division of the song (*vinyāsa*), and the alternative or intermediate note (*antaramārga*).

The ancient authors refer to the following eighteen *jātis* — seven pure or authentic (*śuddha*), and eleven mixed or composite (*vikṛta*) — each belonging to one of the two well known basic scales (*grāma*):

ṣaḍjagrāma-jātis:		madhyamagrāma-jātis:	
śuddha:	ṣāḍjī	śuddha:	gāndhārī
	ārṣabhī		madhyamā
	dhaivatī		pañcamī
	naiṣādī	vikṛta:	gāndhārodīcyavā
vikṛta:	ṣaḍjakaiśikī		raktagāndhārī
	ṣaḍjodīcyavā		kaiśikī
	ṣaḍjamadhyamā		madhyamodīcyavā
			karmāravī
			gāndhārapañcamī
			āndhrī
			nandayantī

The ancient modes (*jāti*) are accredited with specific aesthetic qualities whereby the predominant note of a jāti, and hence the jāti as a whole, expresses a particular sentiment (*rasa*), e.g. heroism (*vīra*), fury (*raudra*), wonder (*adbhuta*), love (*śṛṅgāra*), mirth (*hāsya*), compassion (*karuṇa*), disgust

[49] ŚārṅSR. 1, 7, 29-30.

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(*bibhatsā*), or terror (*bhayānaka*). Since the above mentioned ten essentials (*lakṣaṇa*) and aesthetic qualities (*rasa*) are attributed not only to jātis but also to rāgas, musicologists are inclined to think that the ancient basic modes (*jāti*) were the forerunners of the rāgas. At the same time one should not overlook the fact that the *rāga* is credited with two more qualities which are missing in the characterization of the *jāti*. It is especially these qualities that enable us to draw a clear distinction between the abstract basic mode, which is the *jāti*, and the melodic pattern or *rāga*.

A *rāga* is not only determined by the above mentioned modal essentials (*lakṣaṇa*) and aesthetic qualities (*rasa*), but also by its melodic line (*varṇa*, lit.: "colour"), which can be ascending (*ārohin*), descending (*avarohin*), stable (*sthāyin*), or irregular in movement (*saṃcārin*), and last but not least a *rāga* is determined by its ornamentation (*alaṃkāra*, which covers not only grace notes, but also particular sequences of notes and motifs.

In my view the *jātis* only served for the purpose of classifying the *rāgas* according to their modal essentials. The term *jāti* — in itself a neutral term meaning "origin", or "category", "class", "genus" — appears in musical theory in various contexts, but is always connected with classification. Besides referring to the basic modes, it indicates special methods for playing stringed instruments[50] and "covered instruments" or membranophones.[51].

On the other hand the term *rāga* is by no means neutral. While indicating a melody or melodic pattern, *rāga* generally means: 1. "passion", "emotion" or "sentiment", and 2. "beauty", "charm". These connotations relate to its function of expressing an aesthetic sentiment (*rasa*) and delighting the mind of the listener.[52] From the earliest times *rāga* must have been associated with *rasa*, the basic element of ancient Indian aesthetics. Although in the Nāṭyaśāstra (dating from the first century B.C. or the first century A.D.) the eight standardized, stereotyped sentiments (*rasa*) representing the fundamentals of ancient Indian drama (*nāṭya*) — a kind of "Gesamtkunstwerk" in which acting, dancing and music were equally important — are mentioned in connection with the basic modes (*jāti*), it was the great variety of melodic patterns (*rāgas*) developed during the Middle Ages (i.e. from the seventh century A.D. to the sixteenth century) which enabled the musician to express the different nuances of the main rasas. In the tenth century Abhinavagupta, the great commentator on the Nāṭyaśāstra, incorporated the rasas in his theory of salvation. From that time experiencing *rasa* was

[50] Compare BhN. 29, 75-77 (Bombay ed.); Ghosh, Transl. II, p. 43, ch. 29, 105-107.
[51] Compare BhN. 34, 148-170 (Baroda ed.); Ghosh, Transl. II, p. 178-182, ch. 33, 129-169.
[52] See the definition of MBṛh. 281.

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no longer considered a purely aesthetic indulgence but a means of purifying the mind, or rather of training it to enjoy sentiments (*rasa*) without personal attachment — a yogic exercise in order to obtain final emancipation. The musician could attain "God-Sound" (*nāda-brahman*), the "Unmanifested Essence of Sound" (*anāhata-nāda*) by means of his correct interpretation according to the rules of *rāga* and *rasa*. Nevertheless a single mistake on his part would spoil the whole effect of the performance. This reminds us of the ancient rules of ritualistic music referred to in the Nāradīyā Śikṣā,[53] which states that a wrong musical intonation amounts to a crime whereby one risks one's life, one's progeny and one's cattle (i.e. the most precious possessions of ancient Indian man).

Indian music has always figured during religious ceremonies, festivals and on all important occassions in human life, such as birth, marriage, etc. As these ceremonies are bound to specific, auspicious times, it is quite understandable that also the times for performing such music were restricted. It is safe to assume that certain rāgas were reserved for special occasions and that their performance was confined to set times. Several ancient pentatonic and hexatonic series of notes (*tāna*) were named after religious ceremonies or sacrifices, e.g. the formula *ni-dha-pa-ma-ga-ri* was called *agniṣṭoma*, *ri-ni-dha-pa-ma-ga* was known as *aśvamedha* and *ma-ga-sa-ni-dha-pa* as *mahāvrata*.[54] Later Indian rāgas are however rarely named after a festival, except for the *hindola* rāga, which is a reminder of the spring festival named *dola*.

Ever since the Middle Ages some important rāgas have been associated with particular seasons. Nānyadeva,[55] the eleventh century commentator on the Nāṭyaśāstra, states that the rāga *bhinnaṣaḍja* — the parent rāga of *bhairava rāga* — should be performed in winter, *kaiśika* in the second half of winter, *hindola* in spring, *pañcama* in summer, and finally the rāgas *ṣaḍjagrāma* and *ṭakka* during the rains.

In the thirteenth century Śārṅgadeva restricts the performance of many of his rāgas to specific periods of the day. In listing all these rāgas mentioned by him, I arrived at the following systematic arrangement:

time of performance	type of rāga (gīti)	names of rāgas
morning	1. pure (śuddha or cokṣa)	śuddhasādhārita ṣaḍjagrāma

[53] NārŚ. 1, 1, 6.
[54] Compare MBṛh. 106-117.
[55] Bharatabhāṣya 5, 51-54.

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		śuddhakaiśika
		madhyamagrāma
		ṣāḍava
		śuddhakaiśikamadhyama
		śuddhapañcama
morning	2. mixed (bhinna)	bhinnakaiśikamadhyama
		bhinnatāna
		bhinnakaiśika
		bhinnaṣaḍja
		bhinnapañcama
noon	3. skilful (gauḍa)	gauḍakaiśikamadhyama
		gauḍapañcama
		gauḍakaiśika
evening	4. passionate (vesāra or rāga)	vesāraṣāḍava
		boṭṭa
		mālavapañcama
		mālavakaiśika
		ṭakka
		hindola
		sauvīra
		ṭakkakaiśika
any time	5. universal (sādhāraṇa)	rūpasādhārita [56]

Examining Śārṅgadeva's apparently systematic application of performance times I was unable to trace any relationship between the predominant note (*aṃśa*) in a rāga and its time of performance. The ancient Indian system which associates the seven notes of the *saptaka*, viz. *sa*, *ri*, *ga*, *ma*, *pa*, *dha*, and *ni*, with particular rasas, deities, social classes, animals, colours, etc., does not establish any particular relation between the musical notes and the seasons or periods of the day. The modern concept that rāgas performed at particular hours are characterized by special flat or sharp notes is probably of recent origin.

The eighth century author Mataṅga [57] has given some definitions of the above mentioned five types of rāgas. Though somewhat vague, these to

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[56] In this connection Śārṅgadeva only mentions *rūpasādhārita*, although also the rāgas *ṣaḍjakaiśika*, *nartarāga*, *śaka*, *kakubha*, *bhammāṇapañcama*, and *gāndhārapañcama* belong to this class. Cf. MBṛh. 362 f., p. 103, line 7-12; ŚārṅSR. 2, 2, 55-109. The rāgas *pañcamaṣāḍaba*, *revagupta* and *ṭakkasaindhava* which MBṛh. 358-362 also lists under the *sādhāraṇa* class of *gītirāgas* are according to ŚārṅSR. 2, 1, 15-16 only secondary rāgas (*uparāgas*).

[57] MBṛh. 291-293.

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some extent explain why Śārṅgadeva prescribes a particular time for performing those rāgas. In defining the first two types, i.e. the pure (*śuddha*) and the mixed (*bhinna*) *gītis*, Mataṅga lays stress on the low (*mandra*) and the high (*tāra*) registers (*sthānas*). In these rāgas, which should be performed in the morning, the range of the melody is obviously rather important. He states that the third category of rāgas, the *gauḍa-gīti* rāgas, contain melodies that ascend and descend without interruption, which calls for skill in rendering as does the *gauḍa* style of poetry. Noon is apparently considered the most appropriate time for displaying the technical skill typifying the *gauḍa-gīti* rāgas. Since evening is generally associated with love and passion, it is understandable that the rāgas of class four, the passionate (*vesāra* or *rāga*) *gīti*, are to be performed in the evening, and since Mataṅga defines the universal (*sādhāraṇa*) rāgas of class five as a mixture of all the other types of rāgas, they could be performed at any time.

Grāma and *jāti* have become obsolete in Indian music, the term *mūrchanā* only retained its general meaning of an ascending and descending octave scale, and the term *śruti* is now only used to indicate the level of pitch or intonation, but the term *rāga* has preserved several of its ancient connotations. *Rāga* is still the basic phenomenon of Indian music, though in course of time it has lost many of its ancient modal essentials and modern practice tends to disregard rules about aesthetic qualities (*rasa*) and times of performance.

However some Indian rāgas, the historical development of which can be traced in the musical treatises, have preserved their ancient times of performance up to the present day, for example:

1. The modern Hindustānī *bhairav* observes the same time for performance as its ancient equivalent *bhairava*, which originated from the ancient morning rāga *bhinnaṣaḍja*.

2. *Karṇāṭagauḍa*, being in ancient times a secondary rāga (*upāṅga*) of the rāga *gauḍa*, which originated from the ancient evening rāga *ṭakka*, is still an evening rāga in modern Karṇāṭak music.

3. The rāga *kedāra*, which in ancient times was also an *upāṅga* rāga of the rāga *gauḍa*, has always been and still remains an evening rāga.

4. The modern *lalitā* rāga — a popular rāga in the South, but very rare in Hindustānī music — which should be performed in the early morning between six and nine, is connected with the ancient second *lalitā* rāga derived from the ancient morning rāga *bhinnaṣaḍja*.

5. The modern Hindustānī and Karṇāṭak rāgas *mālāśrī* with different basic scales are historically connected with the traditional rāga *mālavaśrī*. The latter, sprung from the ancient evening rāga *mālavakaiśika*, has remained

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a late afternoon rāga, which should be performed between three and six p.m., i.e. during the fourth *prahar*.

6. The rāga *naṭa*, which has a different basic scale in Hindustānī and Karṇāṭak music, is most probably historically connected with the two ancient rāgas *naṭṭā* which respectively originated from the ancient evening rāgas *hindola* and *vesāraṣāḍava*. The rāga *naṭā* has always been and is still performed in the evening.

7. *Śrīrāga*, which has a different basic scale in Hindustānī and Karṇāṭak music, was in ancient times a secondary rāga (*rāgāṅga*) derived from the evening rāga *ṭakka*. According to most authors excepting Dāmodara,[58] *śrīrāga* should be performed in the evening.

8. The modern Hindustānī *varārī* (*barārī*) is still performed at the same time that applied to the ancient *śuddhavarāṭika* (= *batukī*) which was derived from the ancient evening rāga *sauvīra*.

9. The modern Hindustānī *basant* is also an evening rāga like the ancient *vasanta* and its parent rāga *hindola*.

During the Middle Ages, possibly under the influence of tantrism, which links mental processes with images, the melodic patterns (*rāgas*) were considered to be personifications. Śārṅgadeva was the first to associate the main rāgas with particular celestial bodies and deities:

celestial body:	rāga:
sun (sūrya)	śuddhasādhārita
	rūpasādhārita
moon (soma)	śuddhakaiśikamadhyama
	bhinnakaiśikamadhyama
	gauḍakaiśikamadhyama
venus (bhṛgu)	ṣāḍava
	vesaraṣāḍava
saturn (śanaiścara)	bhinnapañcama
	gauḍapañcama
jupiter (bṛhaspati)	ṣaḍjagrāma
mars (bhūmisuta)	śuddhakaiśika
polar star (dhruva)	madhyamagrāma
dragon's tail (ketu)	mālavapañcama
dragon's head (rahu)	gāndhārapañcama

[58] DāmSD. 2, 95 (A. A. Bake, Bijdrage tot de kennis der Voor-Indische Muziek, Thesis Utrecht, Parijs 1930).

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deity :	rāga :
Kāma	śuddhapañcama
	hindola
Brahma	bhinnaṣaḍja
Śiva	bhinnatāna
	bhinnakaiśika
	gauḍakaiśika
	ṭakkakaiśika
	ṣaḍjakaiśika
	boṭṭa
	ṭakka
	sauvīra
	śaka
	bhammānapañcama
Viṣṇu-Kṛṣṇa	mālavakaiśika
Yama	kakubha

It is interesting to note that Śiva is associated with the highest number of rāgas (ten), while the other gods are only connected with one or two. In ancient Indian literature Śiva is often mentioned as creator of the dance. Śiva is also said to have invented five of the six main rāgas [59] of the famous *rāga-rāginī* systems, which were considerably developed after the fourteenth century, although they may have originated before the time of Śārṅgadeva.

So far I have been unable to trace Śārṅgadeva's planetory associations with music. Strictly speaking they are not directly connected with the ancient Indian system whereby each note of the octave (*saptaka*) was related to a particular deity, social class, sentiment (*rasa*), colour, finger of the hand, verse-metre,[60] or even to a particular asterism (*nakṣatra*), astrological house (*rāśi*), and presiding deity of an astrological house (*rāśyādidevatā*),[61] but they may have been based on the same general idea. At least the ancient system reflects the microcosmos-macrocosmos idea which, being the result of a magical view of life, is not only typical of ancient Indian thinking, but is also found in ancient Mesopotamia. While some of the above mentioned associations are to be found in other ancient cultures too, as for instance the theory of ethos in the music of ancient Greece and the ancient

[59] Compare DāmSD. 2, 10 f.

[60] Compare NārŚ. 1, 4, 1 f.; 1, 5, 3; 1, 5, 13 f.; 1, 7, 3; 1, 7, 6 f.; MBṛh. 64; 77 f.; 81-85; ŚārṅSR. 1, 3, 46; 1, 3, 54-59; NārSM. 1, 1, 30-39; KuSR. 2, 1, 1, 212; 2, 1, 1, 260-267.

[61] NārSM. 1, 1, 42-45.

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Greek idea of the harmony of the spheres which probably originated in Mesopotamia, it can be claimed that in no other culture were the interrelations between music and other phenomena of the immanent and transcendent world worked out so systematically as in India. However, none of Śārṅgadeva's planets and deities mentioned in connection with particular rāgas corresponds to any of the ancient planets and deities associated with the predominant notes of these rāgas. Only in the case of the rasas is there continuity and after the time of Śārṅgadeva planets are no longer referred to in this context.

The fourteenth century author Sudhākalaśa[62] describes the rāgas iconographically by mentioning the attributes of certain deities of the Jainist pantheon; but none of his rāga personifications actually points to any particular deity. Sudhākalaśa's rāga descriptions are quoted in the fifteenth century work, the Saṃgītarāja by Mahārāṇa Kumbha.

During the following centuries secular elements were incorporated in these iconographic rāga descriptions or *dhyānas* (lit. "contemplation formulas"). A number of rāgas still personified a deity (*bhairava*: Śiva; *hindola*: Kṛṣṇa; *vasanta*: Vasanta, the god of spring; *khambhāvatī*: Brahmā; *aḍḍāna*: Kāmadeva). Some rāgas did not directly personify gods, but represented ascetics or devotees. For example the rāga *devagāndhāra* represented an ascetic, the rāginīs *baṅgālī* and *kedārī* represented female ascetics, *devagīrī* represented a woman carrying utensils for a religious performance, *bhairavī* a woman performing a ceremony in a Śiva temple and *saindhavī* a Śiva devotee clad in red and carrying a trident. But beside these personifications of a religious character, a new type of dhyānas developed which described the rāgas and rāginīs as the heroes and heroines of the ancient Indian theatre. The latter generally represent various aspects of the erotic sentiment (*śṛṅgāra rasa*), but are sometimes manifestations of other sentiments, such as the warrior representing the rāga *naṭa* who obviously expresses the sentiment of fury (*raudra rasa*).

This trend gave rise to a vast literature on the personification of rāgas and most musical treatises[63] dating from the sixteenth and seventeenth centuries pay attention to this subject. A special class of works, called *Rāgamāla*, was specifically devoted to this purely aesthetic aspect of music.

However, it was not only literature that was strongly influenced by this development. Besides literary descriptions of the personification of melodic patterns, a special type of painting, the so-called *rāgamāla* miniatures, came

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[62] SudhSS. 3, 76-111.
[63] For example SubhSD., NārCRN., ŚrīRK., SomRV., DāmSD.

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into being. A considerable number of miniatures, often painted in sets of thirty-six, are accompanied by the relevant (and sometimes irrelevant!) dhyānas quoted from musical treatises.[64]

To this branch of musical aesthetics we owe several so-called *rāga-rāginī* systems, generally containing six male *rāgas* representing the chief melodic patterns and a number of *rāginīs* (consorts) and *putras* (sons) representing the secondary melodic patterns. But these systems are of little use to those attempting a musical classification of the rāgas.

Nevertheless the sixteenth and seventeenth centuries produced new systems of ragā classification based on purely musical principles. When owing to the invention of the fretted *vīṇā*, the ancient temperament with its unequal whole tones (of 4 and 3 śrutis) was gradually replaced by a new temperament consisting of twelve more or less (but never absolutely) equal half tones within the octave, the melodic patterns (*rāga*) had to be reclassified in keeping with these new scalar principles. Govinda Dīkṣitar, the author of the Saṅgītasudhā (1614 A.D.),[65] states that Vidyāraṇya — a well known Sanskrit author from the Vijayanagar kingdom, who lived from 1320 to 1380 A.D. — had already used a system of fifteen melas in his Saṃgītasāra. Thus far however, no manuscript of this work has been discovered.

In 1550 Rāmāmātya introduced in his Svaramelakalānidhi a system of twenty basic scales (*mela*), the notes and names of which were taken from some prominent rāgas of his time, and he classified all the rāgas under these twenty scales. The ten ancient modal essentials (*lakṣaṇa*), which by that time had been reduced to five (the predominant note or *aṃśa*, the initial note or *graha*, the final note or *nyāsa*, the hexatonic structure or *ṣāḍava* and the pentatonic structure or *auḍava*), were no longer considered to be criteria for classifying rāgas. This means that the ancient modal system was now finally replaced by a scalar system. Nevertheless individual rāgas continued to preserve some of their ancient modal essentials (*lakṣaṇa*), in certain cases even until today. This continuity in the history of Indian rāgas is aptly illustrated by the following rāgas: 1. The Karṇāṭak rāga *mukhāri* (a *rāga* as well as a *mela*), which according to the eighteenth century author Tulaja[66] is the same rāga as the ancient *śuddhasādhārita*; 2. Karṇāṭak *varāṭī* (or *varālī*), i.e. both *sāmavarālī* and *jhalavarālī*; 3. Hindustānī *varārī* (*barārī*) and *varāṭī*; 4. Hindustānī *bhairava*; 5. Karṇātak *lalitā*; 6. Karṇāṭak ad Hindustānī *dhanāśrī*; 7. Hindustānī *saindhavī*.

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[64] Mostly from DāmSD. and ŚubhSD.
[65] Edited by V. Raghavan, Madras 1940, p. 152 f., verses 413 f.
[66] TulSS. p. 105.

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In 1620 Veṅkaṭamakhin corrected Rāmāmātya's mela system by reducing the number of melas to nineteen, obviously because the notes of two of those melas, viz. *kedāragaula* and *sāraṅgaṅāṭa*, were the same. In the appendix (*anubandha*) to his Caturdaṇḍiprakāśikā, Veṅkaṭamakhin mentions another system consisting of 72 melas which bear the names of prominent contemporary rāgas and are each considered to be the basic scale of one or more rāgas. This system of 72 melas is almost identical with the modern Karṇāṭak mela system in which towards the end of the eighteenth century Govinda, the author of the Saṃgrahacūḍāmaṇi, changed the names of some melas. It is interesting to note that a number of Veṅkaṭamakhin's melas were already marked with the so-called *kaṭapayādi* prefixes. This prefix, which indicates in modern Karṇāṭak music the number of the mela in the 72-mela system in reverse order, is obtained by using the *kaṭapayādi* formula which classifies the letters of the Sanskrit alphabeth as follows:

	1	2	3	4	5	6	7	8	9	10
I[67]	क ka	ख kha	ग ga	घ gha	ङ ṅa (ṅg)	च ca	छ cha	ज ja	झ jha	ञ ña (jñ)
II[68]	ट ṭa	ठ ṭha	ड ḍa	ढ ḍha	ण ṇa	त ta	थ tha	द da	ध dha	न na
III[69]	प pa	फ pha	ब ba	भ bha	म ma					
IV[70]	य ya	र ra	ल la	व va	श śa	ष ṣa	स sa	ह ha		

It is not known who invented this ingenious system of numbering melas by means of *kaṭapayādi* prefixes. According to Sambamoorthy[71] this invention must have been later than king Tulaja's Saṃgītasārāmṛta (1735), since that work refers to only 21 melas which were named without the prefixes. Furthermore Sambamoorthy[72] states that the so-called *kanakāmbarī-phenadyuti* nomenclature — the mela names found in the appendix to the Caturdaṇḍiprakāśikā — though ascribed to Veṅkaṭamakhin, is not his. Despite its doubtful origin, it was this system which was used by the famous Karṇāṭak composer Muttusvāmī Dīkṣitar (1775-1835). A second nomenclature also working with the *kaṭapayādi* prefixes, the so-called *kanakāṅgī-*

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[67] *kādinava* i.e. a series of 9(!) letters (gutturals and palatals) starting with *ka*.
[68] *ṭādinava* i.e. a series of 9(!) letters (cerebrals and dentals) starting with *ṭa*.
[69] *pādipañca* i.e. a series of 5 letters (labials) starting with *pa*.
[70] *yādyaṣṭa* i.e. a series of 8 letters (semivowels and spirants) starting with *ya*.
[71] South Indian Music, III, Madras [6]1964, p. 50.
[72] o.c., p. 47.

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ratnāṅgī nomenclature, was used by Tyāgarāja (1759 or 1767-1847) and other Karṇāṭak composers including the nineteenth century composer Mahāvaidyanātha Ayyar (Śivan), who followed it in composing his famous *rāgamālikā* (lit. "garland of rāgas", i.e. a musical composition based on a series of rāgas) consisting of 72 melas. This second system has become the standard system of modern Karṇāṭak music.

The numbers of the 72 Karṇāṭak melas can be explained as follows: There are 12 series of 6 melas, all having the same tonic (*śuddha sa*) and fifth (*śuddha pa*). All melas in the series 1 to 6 have a perfect fourth or *śuddha ma* (abbreviated *ma*), whereas the melas in the series 7 to 12 have an augmented fourth or *prati ma* (abbr. *mi*). With respect to the other notes of the scale series 7 to 12 duplicate series 1 to 6 respectively. Each series is determined by the lowest, middle or highest variety of the second (abbr. *ra*, *ri*, *ru*) and third note (abbr. *ga*, *gi*, *gu*). The six melas of each series are individually determined according to their use of the lowest, middle or highest variety of the sixth (abbr. *dha*, *dhi*, *dhu*) and seventh note (abbr. *na*, *ni*, *nu*). In order to make a clear distinction between the three varieties of the notes *ri*, *ga*, *dha* and *ni* the vowels of these tone syllables are changed, -a indicating the lowest, -i indicating the middle and -u indicating the highest variety. For example: *ra*, *ri*, *ru* = d♭, d, d♯ if *sa* is equated to the Western c; and *ra*, *ri*, *ru* = e♭, e, e♯ if *sa* is equated to the Western d.

In short, the structure of the first (i.e. lower) tetrachord (*pūrvāṅga*) of a mela is determined by its serial (*cakra*) number, while the structure of the second (i.e. higher) tetrachord (*uttarāṅga*) is determined by the number of the scale within a particular series (*cakra*). Multiplying the serial (*cakra*) number (after having subtracted one) by the number six and adding the number of the scale within the series, one arrives at the exact *mela(karta)* number.

The entire mela system is surveyed in the chart on page 45f.

During the second half of the sixteenth century Puṃḍarīkavitthala introduced Rāmāmātya's mela system in North India. Generally speaking Puṃḍarīkavitthala presented that system in is Rāgamañjarī, but he changed the names and scales of several melas. Another South Indian musicologist who migrated to the North was Śrīkaṇṭha, who wrote his Rasakaumudī at about the same time. He reduced Rāmāmātya's twenty melas (as *sāraṅgaṇāṭa* and *kedāragaula* were actually the same scale, there were really only nineteen different scales) to eleven. This new system resembles the contemporary Arabic system of twelve predominant modes (*māqām*), the scales

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Pūrva or *śuddha-madhyama* melakartas

cakra number	*pūrvāṅga* notes	*uttarāṅga* notes	scale number	*melakarta* name	number
I	ra-ga	dha-na	1	kanakāṅgī	1
		dha-ni	2	ratnāṅgī	2
		dha-nu	3	gānamūrti	3
		dhi-ni	4	vanaspati	4
		dhi-nu	5	mānavatī	5
		dhu-nu	6	tānarūpī	6
II	ra-gi	dha-na	1	senāpati	7
		dha-ni	2	hanumattoḍī	8
		dha-nu	3	dhenukā	9
		dhi-ni	4	nāṭakapriyā	10
		dhi-nu	5	kokilapriyā	11
		dhu-nu	6	rūpāvatī	12
III	ra-gu	dha-na	1	gāyakapriyā	13
		dha-ni	2	vakulābharaṇam	14
		dha-nu	3	māyāmālavagaula	15
		dhi-ni	4	cakravāka	16
		dhi-nu	5	sūryakānta	17
		dhu-nu	6	hāṭakāmbarī	18
IV	ri-gi	dha-na	1	jhanakāradhvani	19
		dha-ni	2	naṭabhairavī	20
		dha-nu	3	kīravāṇī	21
		dhi-ni	4	kharaharapriya	22
		dhi-nu	5	gaurīmanoharī	23
		dhu-nu	6	varuṇapriyā	24
V	ri-gu	dha-na	1	māraraṅjanī	25
		dha-ni	2	cārukeśī	26
		dha-nu	3	sarasāṅgī	27
		dhi-ni	4	harikāmbhojī	28
		dhi-nu	5	dhīraśaṃkarābharaṇam	29
		dhu-nu	6	nāganandinī	30
VI	ru-gu	dha-na	1	yāgapriyā	31
		dha-ni	2	rāgavardhanī	32
		dha-nu	3	gāṅgeyabhūṣaṇī	33
		dhi-ni	4	vāgadhīśvarī	34
		dhi-nu	5	śūlinī	35
		dhu-nu	6	calanāṭa	36

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Uttara or *prati-madhyama* melakartas

cakra number	*purvāṅga* notes	*uttarāṅga* notes	scale number	*melakarta* name	number
VII	ra-ga	dha-na	1	sālaga	37
		dha-ni	2	jalārṇava	38
		dha-nu	3	jhālavarālī	39
		dhi-ni	4	navanītam	40
		dhi-nu	5	pāvanī	41
		dhu-nu	6	raghupriyā	42
VIII	ra-gi	dha-na	1	gavāmbodhi	43
		dha-ni	2	bhavapriyā	44
		dha-nu	3	śubhāpantuvarālī	45
		dhi-ni	4	ṣaḍvidhamārgiṇī	46
		dhi-nu	5	suvarṇāṅgī	47
		dhu-nu	6	divyamaṇi	48
IX	ra-gu	dha-na	1	dhavalāmbarī	49
		dha-ni	2	nāmanārāyaṇī	50
		dha-nu	3	kāmavardhanī	51
		dhi-ni	4	rāmapriyā	52
		dhi-nu	5	gamanaśramā	53
		dhu-nu	6	viśvāmbharī	54
X	ri-gi	dha-na	1	śyāmalāṅgī	55
		dha-ni	2	ṣaṇmukhapriyā	56
		dha-nu	3	siṃhendramadhyamā	57
		dhi-ni	4	hemavatī	58
		dhi-nu	5	dharmāvatī	59
		dhu-nu	6	nītimatī	60
XI	ri-gu	dha-na	1	kāntāmaṇi	61
		dha-ni	2	ṛṣabhapriyā	62
		dha-nu	3	latāṅgī	63
		dhi-ni	4	vācaspati	64
		dhi-nu	5	mecakalyāṇī	65
		dhu-nu	6	citrāmbarī	66
XII	ru-gu	dha-na	1	sucaritrā	67
		dha-ni	2	jyotiḥsvarūpiṇī	68
		dha-nu	3	dhātuvardhanī	69
		dhi-ni	4	nāsikābhūṣaṇī	70
		dhi-nu	5	kosala	71
		dhu-nu	6	rasikapriyā	72

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of which do not however correspond with the Indian melas.[73] Śrīkaṇṭha realized that, since according to Rāmāmātya's system in practice the *cyuta-madhyama ga* (f♯ +8 cents) and *cyutaṣaḍja ni* (c♯ +10 cents) were represented by the same pitches as the lower notes *antara ga* (f♯ 16) and *kākalī ni* (c♯ 14), some of Rāmāmātya's basic scales containing these notes must coincide. Furthermore Śrīkaṇṭha refused to accept Puṃḍarīkavitthala's nomenclature of the four varieties of *ri* and *dha* (viz. *śuddha*, *ekagatika*, *dvitīyagatika* and *tṛtīyagatika*), two of which coincide with the *śuddha* and *sādhāraṇa* (or *kaiśika*) varieties of the next notes in the scale (*ga* and *ni*). However, Puṃḍarīkavitthala's system of basic notes can be easily recognized in the *svara* nomenclature expounded in Somanātha's Rāgavibodha (written in 1609 A.D. in Andhra Pradesh). Differences in the names given to the basic notes by these four authors are clarified in the following table:[74]

Śrīkaṇṭha	Rāmāmātya	Puṃḍarīkavitthala	Somanātha
śuddha sa	śuddha sa	śuddha sa	śuddha sa
śuddha ri	śuddha ri	śuddha ri	śuddha ri
		ekagatika ri	tīvra ri
catuḥśruti ri	pañcaśruti ri	dvitīyagatika ri	tīvratara ri
	ṣaṭśruti ri	tṛtīyagatika ri	tīvratama ri
śuddha ga	śuddha ga	śuddha ga	śuddha ga
sādhāraṇa ga	sādhāraṇa ga	ekagatika ga	sādhāraṇa ga
	antara ga	dvitīyagatika ga	antara ga
cyuta ma	cyutama. ga	tṛtīyagatika ga	mṛduma ga
			tīvratama ga
śuddha ma	śuddha ma	śuddha ma	śuddha ma
		ekagatika ma	
		dvitīyagatika ma	tīvratama ma
cyuta pa	cyutapa. ma	tṛtīyagatika ma	mṛdupa ma
śuddha pa	śuddha pa	śuddha pa	śuddha pa
śuddha dha	śuddha dha	śuddha dha	śuddha dha
		ekagatika dha	tīvra dha
catuḥśruti dha	pañcaśruti dha	dvitīyagatika dha	tīvratara dha
	ṣaṭśruti dha	tṛtīyagatika dha	tīvratama dha
śuddha ni	śuddha ni	śuddha ni	śuddha ni
kaiśika ni	kaiśika ni	ekagatika ni	kaiśika ni
	kākalī ni	dvitīyagatika ni	kākalī ni
cyuta sa	cyutasa. ni	tṛtiyagatika ni	mṛdusa ni

[73] Compare Manik, o.c., p. 66 and 106 (Tabelle 10); R. d'Erlanger, La Musique Arabe 3, Paris 1938, p. 135 f.; 386; 397-401; 5, Paris 1949, p. 113-115.

[74] The brackets indicate similarity of pitch of the notes.

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Somanātha's *svara* nomenclature differs very little from Puṃḍarīka-vitthala's system. In studying Somanātha's rāgas, I found that this author also borrowed a considerable number of Puṃḍarīkavitthala's rāga definitions. Presumably Somanātha, Puṃḍarīkavitthala and Śrīkaṇṭha used the same temperament as Rāmāmātya did, i.e. a temperament based on the *svayambhu* (natural harmonic) relation of the perfect fifth (ratio $^3/_2$), since these authors all refer to the same method of tuning of the strings and placing the frets of the *vīṇā* as Rāmāmātya mentions in his Svaramelakalānidhi. The question remains open as to how far the contemporary Arabic system of 17 tones influenced Somanātha's 17 tones corresponding to his 22 names of the notes (five tones are called by double names).

In the *svayambhu* temperament the placement of the frets provided only twelve fixed positions within the octave (*saptaka*), viz. the positions of the notes *śuddha sa*, *śuddha ri*, *śuddha ga*, *sādhāraṇa ga*, *antara ga*, *śuddha ma*, *mṛdupañcama ma*, *śuddha pa*, *śuddha dha*, *śuddha ni*, *kaiśika ni*, *kākalī*; but all other notes including microtonal alterations could be easily produced by deflection (sideward pulling) of the strings.

The above mentioned four types of *svara* nomenclature reveal a tendency to simplify the tone-system by equating the pitch of several notes, for example, *tīvratara ri* (*dvitīyagatika ri*, *pañcaśruti ri*) = *śuddha ga*. This simplification is most evident in Śrīkaṇṭha's denomination of notes.

Towards the end of the seventeenth century the North Indian musicologists Ahobala and Hṛdayanārāyaṇadeva definitely reduced the number of basic notes to twelve. For the first time in the history of Indian music they clearly determined the positions of these twelve notes by indicating the relevant string divisions, a fact which enables us to calculate the exact frequency ratios of these notes. In their *svara* nomenclature however both authors continue to use the old system containing double names for some notes, i.e. *pūrva ga* = *śuddha ri*; *tīvratara ri* = *śuddha ga*; *atitīvratama ga* = *śuddha ma*; *pūrva ni* = *śuddha dha*; *tīvratara dha* = *śuddha ni*. The *svara* names of Ahobala and Hṛdayanārāyaṇadeva are identical except for Ahobala's *tīvra ga* and *tīvra ni*, which Hṛdayanārāyaṇadeva called *tīvratara ga* and *tīvratara ni* respectively.

Although it is not certain whether Hṛdayanārāyaṇadeva's Hṛdayaprakāśa was written before or after Ahobala's Saṃgītapārijāta (1665 A.D.), the latter probably came first, since it is a larger and more elaborate work than the Hṛdayaprakāśa which seems to be an abstract. Both these treatises still classify the rāgas according to a system of melas. Following the example set by Śrīkaṇṭha Hṛdayanārāyaṇadeva has chosen a relatively small number (only twelve) of melas and has arranged them in the six categories shown hereunder:

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I. *śuddhasvara* mela, consisting solely of *śuddha* notes: *sa* = d; *ri* = $e^{+4\ cents}$; *ga* = f^{+16}; *ma* = g^{-2}; *pa* = a^{+2}; *dha* = b^{+33}; *ni* = c^{+18}.

II. *ekavikṛta* melas, i.e. melas with one accidental:
   1. melas with *tīvratara ga* = f♯$^{+4}$
   2. melas with *komala dha* = b♭$^{-47}$

III. *dvivikṛta* melas, i.e. melas with two accidentals:
   1. melas with *komala dha* = b♭$^{-47}$ and *komala ri* = e♭$^{+33}$
   2. melas with *tīvratara ga* = f♯$^{+4}$ and *tīvratara ni* = c♯$^{+7}$

IV. *trivikṛta* melas, i.e. melas with three accidentals:
   1. melas with *tīvratara ga* = f♯$^{+4}$, *tīvratara ni* = c♯$^{+7}$ and *tīvratara ma* = g♯$^{+31}$
   2. melas with *tīvratara ga* = f♯$^{+4}$, *tīvratara dha* = b♯$^{+18}$ (= *śuddha ni* = c^{+18}) and *tīvratara ni* = c♯$^{+7}$
   3. One peculiar mela called *hṛdayaramā with tīvratama ga*, *tīvratama ma* and *tīvratama ni*, which were one śruti higher than *tīvratara ga* = f♯$^{+4}$, *tīvratara ma* = g♯$^{+31}$ and *tīvratara ni* = c♯$^{+7}$ respectively and were probably played in the position of the latter with deflection of the string.

V. *caturvikṛta* melas, i.e. melas with four accidentals:
   1. melas with *komala ri* = e♭$^{+33}$, *komala dha* = b♭$^{-47}$, *tīvratara ga* = f♯$^{+4}$ and *tīvratara ni* = c♯$^{+7}$
   2. melas with *atitīvratama ga* = $f^{\times -2}$ (= *śuddha ma* = g^{-2}), *tīvratara ma* = g♯$^{+31}$, *tīvratara dha* = b♯$^{+18}$ (= *śuddha ni* = c^{+18}) and *kākalī ni* (= *tīvratara ni*) = c♯$^{+7}$
   3. melas with *tīvratara ga* = f♯$^{+4}$, *tīvratara ma* = g♯$^{+31}$, *tīvratara dha* = b♯$^{+18}$ and *kākalī ni* = c♯$^{+7}$

VI. *pañcavikṛta* melas, i.e. melas with five accidentals:
tīvratara ga = f♯$^{+4}$, *tīvratara ma* = g♯$^{+31}$, *komala ri* = e♭$^{+33}$, *komala dha* = b♭$^{-47}$, *kākalī ni* = c♯$^{+7}$.

This system of melas expounded in the Hṛdayaprakāśa is most probably modelled on Ahobala's much more elaborate scheme presented in the form of a table in the Calcutta edition of the Saṃgītapārijāta.[75] According to Ahobala's system each category of melas (1-*vikṛta*, 2-*vikṛta*, etc.) has further subdivisions, i.e. heptatonic (*saṃpūrṇa*), hexatonic (*ṣāḍava*) and pentatonic (*auḍava*) scales. The tabulated rāgas in the Saṃgītapārijāta total 11340. Although Ahobala does not describe all these rāgas in detail, in the case of 122 rāgas he mentions their musical characteristics (predominant

[75] Saṃgītapārijāta, Calcutta 1879, table opposite p. 41.

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note, initial note, final note, heptatonic, hexatonic or pentatonic structure and characteristic melodic lines comparable to the modern Karṇāṭak *saṃcāra* and Hindustānī *pakaḍ*) and times of performance. Hṛdayanārāyaṇadeva gives a less detailed description of 73 rāgas in his Hṛdayaprakāśa.

In another work, the Hṛdayakautuka, he uses a different method to present the same system of 12 melas. There he does not classify these twelve melas according to the number of their accidentals (*vikṛta svaras*), but refers to them as independent basic scales (*saṃsthānas*) named after their most representative rāga.

saṃsthāna	vikṛta svaras	scale in Western equivalents
bhairavī	sometimes komala dha	d e^{+4} f^{+16} g^{-2} a^{+2} $b^{+33\,(-47)}$ c^{+18}
toḍī	komala ri and dha	d $e♭^{+33}$ f^{+16} g^{-2} a^{+2} b^{-47} c^{+18}
gaurī	komala ri and dha, tīvratara ga and ni	d $e♭^{+33}$ $f♯^{+4}$ g^{-2} a^{+2} b^{-47} $c♯^{+7}$
karṇāṭa	tīvratara ga	d e^{+4} $f♯^{+4}$ g^{-2} a^{+2} b^{+33} c^{+18}
kedāra	tīvratara ga and ni	d e^{+4} $f♯^{+4}$ g^{-2} a^{+2} b^{+33} $c♯^{+7}$
imana	tīvratara ga, ni and ma	d e^{+4} $f♯^{+4}$ $g♯^{+31}$ a^{+2} b^{+33} $c♯^{+7}$
sāraṅga	atitīvratama ga, tīvratara ma, dha and ni	d e^{+4} $f^{×-2}$ $g♯^{+31}$ a^{+2} $b♯^{+18}$ $c♯^{+7}$
megha	tīvratara dha and ni of sāraṅga, and tīvratara ga and śuddha ma of karṇāṭa	d e^{+4} $f♯^{+4}$ g^{-2} a^{+2} $b♯^{+18}$ $c♯^{+7}$
hṛdayarāma	as in megha, but with 5-śruti ga and ni[76]	d e^{+4} $f♯^{+?}$ g^{-2} a^{+2} $b♯^{+18}$ $c♯^{+?}$
dhanāśrī	komala ri and dha, tīvratara ga, ma and ni	d $e♭^{+33}$ $f♯^{+4}$ $g♯^{+31}$ a^{+2} b^{-47} $c♯^{+7}$
mukhārī	komala dha	d e^{+4} f^{+16} g^{-2} a^{+2} b^{-47} c^{+18}
pūrva	as in imana, but with 4-śruti dha[77]	d e^{+4} $f♯^{+4}$ $g♯^{+31}$ a^{+2} $b♯^{-?}$ $c♯^{+7}$

Almost the same system of twelve *ṭhāṭas* is found in Locana's Rāgataraṅginī, which was more or less contemporaneous with the Hṛdayakautuka. Since in describing the *pūrva saṃsthāna* Hṛdayanārāyaṇadeva replaces the *tīvratara dha* = $b♯^{+18}$), which he mentioned in his Hṛdayaprakāśa, by the 4-śruti *dha* referred to by Locana in connection with this rāga, presumably

[76] Here the HrdHP. p. 10, rāga no. 45, prescribes *tīvratama ma* (?) and *śuddha dha* (= b^{+33}).

[77] The position of the 4-śruti *dha* is not quite clear. We might place this note somewhere between *komal dha* (b^{-47}) and *śuddha dha* (b^{+33}). In this connection the HṛdHP. p. 14, rāga no. 72, prescribes the *tīvratara dha* ($b♯^{+18}$).

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Locana's Rāgataraṅginī served as a model for Hṛdayanārāyaṇadeva's Hṛdayakautuka and was hence written before it. Moreover the fact that Hṛdayanārāyaṇadeva omits the rāga *dīpaka* — which was not clearly defined in the Rāgataraṅginī, obviously because this "fire" melody was a very dangerous rāga — and adds a new rāga of his own invention, called *hṛdayaramā*, also seems to point in this direction.

Comparing the systems of twelve basic scales expounded by Hṛdayanārāyaṇadeva and Locana with Śrīkaṇṭha's system of eleven melas, we find that the number of scales with an augmented fourth (*prati ma*) has increased. Whereas towards the end of the sixteenth century Śrīkaṇṭha only mentions *kalyāṇa mela*, which he obviously borrowed from Puṃḍarīkavitthala, the two seventeenth century musicologists Hṛdayanārāyaṇadeva and Locana mention four basic scales with the augmented fourth, namely *imana*, *sāraṅga*, *dhanāśrī* and *pūrva*.

From the historical point of view basic scales with an augmented fourth (*prati ma*) are of particular interest. Some of these scales may indeed be traced back to the ancient *madhyama grāma*, but a considerable number were probably influenced by contemporary Arabic scales. I agree with Brahaspati[78] that there is a tendency among Indian musicologists to hide the fact of borrowing from outside and to interpret foreign scales or notes according to their own classical system. Indian theorists always try to explain the augmented fourth — a predominant note in contemporary Arabic scales, occurring in eight of the twelve classical *māqāmāt* — as *cyuta-pañcama madhyama*, which may theoretically revert back to the ancient *triśruti pañcama* of the *madhyama grāma*. In many cases however, especially in those Indian rāgas in which the augmented fourth was introduced after the fifteenth century, the *tīvra ma* was probably borrowed from Arabic music. This, for instance, may account for the present scalar structure of the modern Hindustānī rāgas *toḍī*, *yaman-kalyān*, *mārvā* and *pūrvī*, though none of these modern Indian basic scales exactly coincides with any Arabian *māqām*. Only the scale of *toḍī* corresponds more or less to the classical *zīrāfkand* of Ṣafīyu-d-Din (= Safi-al-Dīn): c d♭ e♭ f g♭ (= f♯+) a♭ a♭ b♭ c.[79]

Somanātha and Puṇḍarīkaviṭṭhala are the Indian authors who openly admit the existence of foreign influence in their system. When discussing the rāga *turuṣkatoḍī* in ch. 3 of his Rāgavibodha,[80] Somanātha mentions

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[78] K.C. Brahaspati, Muslim influence on Venkatamakhi and his school, in: Sangeet Natak 13 (july-sept. 1969), p. 7.

[79] Compare d'Erlanger, La Musique Arabe 3, p. 386; Manik, o.c., p. 106.

[80] p. 99, ch. 3, 57 comm.

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twelve (?) rāgas from Persia (*parada*) and their Indian equivalents: *irākha* (*irāq*), *husenī* (*ḥusainī*), *julupha* (*?*), *musalī* (*būsalik*), *ujjvala* (*uššāq?*), *navaroja* (*nawrūz*), *vākhareja* (*?*), *hijeja* (*ḥijāzi*), *pañcagraha* (*?*), *puṣka* (*buzurg?*), *saraparda* (*?*) and again *irākha* (*irāq*), which correspond with *karṇāṭagauḍa*, *toḍī*, *bhairava*, *rāmakriyā*, *āsāvarī*, *vihaṅgaḍa*, *deśakāra*, *saindhavī*, *kalyāṇa-yamana*, *devakrī*, *velāvali* and *karṇāṭa* respectively. I am not able to identify all the given names with the twelve classical Arabic *māqāmāt*, nor do I find a single instance in which the scales of both sets are identical. Further and more detailed research may solve this problem.

During the second half of the seventeenth century many North Indian rāgas assumed the definite form in which they appear today. As far as their scales, modal essentials and times of performance are concerned, many modern Hindustānī rāgas go back to Ahobala's Saṃgītapārijāta (1665 A.D.). The eighteenth century development can be traced in a Hindī compilation, the Saṃgītasāra by Pratāpasiṃha (Mahārājā of Jaipur from 1779 to 1804). But also the seventeenth century author Locana has influenced modern Hindustānī music. Although their names have changed, eight of the twelve *saṃsthānas* in Locana's Rāgataraṅginī still function as basic scales in the modern Hindustānī *ṭhāṭ* system invented by the vitally important late nineteenth century North Indian musicologist Viṣṇu Nārāyaṇa Bhātkhaṇḍe (1860-1936). Locana's basic scales *bhairavī* (with *śuddha dha*), *toḍī*, *gaurī*, *karṇāṭa*, *kedāra*, *īmana*, *dhanāśrī* and *mukhārī* correspond with the scales of the modern Hindustānī ṭhāṭs *kāfī*, *bhairavī*, *bhairava*, *khamāj*, *bilāval*, *kalyān*, *pūrvī* and *asāvarī* respectively.

The modern Hindustānī ṭhāṭ *kāfī* was introduced only in the seventeenth century, although its scale (d-e-f-g-a-b-c) sounds much older and reminds us of the ancient *ṣaḍjagrāma* d e^{-35} f^{-33} g^{-2} a^{+2} b^{-33} c^{-31}. The Appendix to Veṅkaṭamakhin's Caturdaṇḍiprakāśikā (1620 A.D.) mentions *kāpi* as rāga no. 9 of mela no. 22 (*śrīrāga* mela), a classification also adopted by Tulaja[81] and Govinda.[82] The notes of mela 22 are identical with those of the modern Hindustānī *kāfī ṭhāṭ*. Towards the end of the seventeenth century Locana[83] and Hṛdayanārāyaṇadeva[84] refer to the same scale in connection with *toḍī saṃsthāna*, which is the basic scale of their *kāpi* rāga, but they add that *komal ri* and *dha* may also be used. The modern Hindustānī *kāfī* is found in Pratāpasiṃha's Saṃgītasāra.[85].

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[81] TulSS. p. 75.
[82] GovSC. p. 118.
[83] LocRT. p. 6.
[84] HṛdHK. p. 9, no. 39.
[85] PrātSS. 7, p. 288.

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The modern Hindustānī *bhairavī* ṭhāṭ assumed its present form with *komal ri* (e♭) at a relatively late day. Its present scale (d e♭ f g a b♭ c) is only mentioned in musical treatises dating from the latter part of eighteenth century, as for example Pratāpasiṃha's Saṃgītasāra.[86] In earlier treatises, both South and North Indian, we find the two following basic scales with *tivra ri* (i.e. the modern Hindustānī *śuddha*, or the Karṇāṭak *catuḥśruti ri* = e): 1. d e f g a b c and 2. d e f g a b♭ c. Scale no. 1 is referred to as *śrīrāga* mela (the basic scale of the rāga *bhairavī*) in Rāmāmātya's Svaramelakalānidhi,[87] Somanātha's Rāgavibodha[88] and Śrīkaṇṭha's Rasakaumudī.[89] Hṛdayanārāyaṇadeva[90] lists *bhairavī* under the *śuddhasvara* mela (d e f g a b c). Scale no. 2 is referred to as *bhairavī* mela in seventeenth and eighteenth century South Indian works.[91] The seventeenth century Karṇāṭak author Veṅkaṭamakhin[92] states that 5-śruti *dha* (= b) might be occasionally used in that scale. The seventeenth century North Indian author Ahobala[93] describes the rāga *bhairavī* as a scale with *komal dha* (b♭). Other seventeenth century North Indian authors[94] state however that *komal* and *śuddha dha* may be used alternately in the *bhairavī saṃsthāna*. The eighteenth century Karṇāṭak author Govinda[95] clearly distinguishes between two types of bhairavī, viz. the hexatonic rāga *bhairavī* (missing *pa*) listed under the *narabhairavī* mela (with Karṇāṭak *śuddha dha* = b♭) and the pentatonic-hexatonic *śuddhabhairavī* (in ascent without *ri* and *pa*, in descent without *pa*) listed under the *kharaharapriya* mela (with *catuḥśruti dha* = b). In ancient times[96] the rāga *bhairavī* is referred to as a secondary rāga (*upāṅga rāga*) derived from the rāga *bhairava*. Towards the end of the sixteenth century Śrīkaṇṭha[97] states that *bhairavī* is mixed with the notes of *bhairava*. At about the same time Puṃḍarīkavitthala[98] listed the *bhairavī* rāga under the *gauḍī* mela (d e♭ f♯ g a b♭ c♯), the South Indian equivalent of the Hindustānī *bhairava* ṭhāṭ. I suggest that the *komal ri* (e♭) of the modern Hindustānī *bhairavī* — even today sometimes replaced by *śuddha ri* (e) — has been taken over from *bhairava*.

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[86] PrātSS. 7, p. 25.
[87] RāmSM. 4, 16-20.
[88] SomRV. 4, 32.
[89] ŚrīRK. 2, 116.
[90] HṛdHP. p. 4, no. 2.
[91] VeṅkCP. 4, 124 f.; TulSS. p. 101.
[92] VeṅkCPApp. mela 20, rāga 9.
[93] AhSP. 374, no. 16.
[94] LocRT. p. 4, no. 4 and HṛdHK. p. 3, verse 22 f.
[95] GovSC. p. 110.
[96] Compare ŚārṅSR. 2, 2, 140; KuSR. 2, 2, 2, 148.
[97] ŚrīRK. 2, 116.
[98] PuṃḍRM. p. 11, no. 19.

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Bhairava, a *rāga* and a *ṭhāṭ(a)*, is very interesting, because the structure of the rāga as a whole is based on ancient tradition. The modern *bhairava* ṭhāṭ (d e♭ f♯ g a b♭ c♯) has approximately the same notes as the parent rāga of the ancient *bhairava*, called *bhinnaṣaḍja*, which is referred to by Mataṅga, Śārṅgadeva and Kumbha.[99] The rāga *bhairava* has also preserved some of its ancient modal essentials. The ancient predominant note (*aṃśa*) *dha* mentioned in the early treatises[100] is still an important note (*vādin*) in the modern Hindustānī rāga *bhairava* and the time (the morning) set for its performance is adhered to by all later North Indian and even some South Indian musicologists. The ancient tradition has been handed down by the the late sixteenth and seventeenth century authors Śrīkaṇṭha, Hṛdayanārāyaṇadeva, Ahobala and Locana, but they listed *bhairava* under the South Indian *mālavagauḍa* or *gaurī* mela.

According to Bhātkhaṇḍe,[101] *khamāj ṭhāṭ* may have originated from *kāmbhojī*, a Karṇāṭak mela and rāga, which seventeenth and eighteenth century South Indian authors[102] describe as a scale consisting of the notes d e f♯ g a b c and as a mode in which *sa* functions as predominant, initial and final note. Its scale is generally regarded as being complete, but *ni*, or *ma* and *ni*, or *ga* and *ni*, may be omitted in the ascent. Moreover Tulaja[103] states that *kāmbhojī* is a secondary rāga (*bhāṣā*) of the ancient rāga *kakubha*. *Kāmbhojī* may indeed have existed in ancient times as it is referred to by Kallinātha,[104] the fifteenth century commentator on the Saṃgītaratnākara, as a *bhāṣā* of *kakubha* and as a complete rāga with *dha* as predominant, initial and final note. Although Śārṅgadeva does not himself mention this rāga in his Saṃgītaratnākara, Kallinātha's reference is based on ancient tradition. A rāga *kāmboja* with the same characteristics is referred to in the eighth century work, Mataṅga's Bṛhaddeśī[105] and again in the fourteenth century Kumbhā[106] describes *kāmbojī* as a rāga with those characteristics. But elsewhere[107] that author states that some experts hold that there is another *kāmbojī* which is derived from the parent rāga *hindola* and has *sa* functioning as predominant, initial and final note and is devoid of *dha* and *ri*. Assuming that this type of *kāmbojī* had the same notes as its ancient

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[99] MBṛh. 324; ŚārṅSR. 2, 2, 79-81; KuSR. 2, 2, 1, 266-278.
[100] See note 99.
[101] Saṃgītaśāstra, I, Hathras ³1964, p. 211.
[102] VeṅkCP. 136-138; VeṅkCPApp. p. 14, mela 28, rāga 8; TulSS. p. 96 f.; GovSC. p. 138 f.
[103] TulSS. p. 96 f.
[104] Compare ŚārṅSR. vol. II, p. 132.
[105] MBṛh. p. 117.
[106] KuSR. 2, 2, 1, 701.
[107] KuSR. 2, 2, 3, 52.

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parent rāga *hindola* which contained a *kākalī ni*, the ancient *kāmboji* omitting *ri* and *dha* probably contained the notes d f⁻ g a c⁻ (and c♯). The sixteenth century renovator Rāmāmātya[108] describes *kāmbhoji* as a mela consisting of the notes d f⁻ (= e⁺) f♯ g a c⁻ (= b⁺) c♯. If we compare this scale with the scale of the ancient *kāmboji* springing from *hindola*, we note a striking similarity but also a difference: Rāmāmātya has added an *antara ga* (f♯). According to him the *kāmbhoji* is an evening rāga, which has *sa* as predominant, initial and final note and is generally complete though *ma* and *ni* may sometimes be omitted in ascent. Puṃḍarīkavitthala[109] adopts Rāmāmātya's description of the musical characteristics of *kāmboji*, but lists this rāga under his *kedāra* mela (d e f♯ g a b c♯). Somanātha[110] defines his *kāmbodī* mela and rāga in the same way as Rāmāmātya does in the case of *kāmbhoji*, but replaces the pentatonic scale by a hexatonic scale devoid of *ni*. Śrīkaṇṭha[111] in describing the *malhāra* mela, the basic scale of his *kāmodī* rāga, slightly changed the traditional (*kāmboji*) scale by raising the *dha* (= b) to *śuddha ni* (c = b♯, the minor seventh being equal to the augmented sixth). This resulted in the following basic scale d e f♯ g a b♯ (= c) c♯, from which later Karṇāṭak as well as Hindustānī authors removed the *kākalī ni* (c♯). In 1665 Ahobala[112] defines *kāmbodhī* as an evening rāga from which *ma* and *ni* are omitted in the ascent. Other North Indian authors of the late seventeenth century namely Hṛdayanārāyaṇadeva[113] and Locana[114] refer to the same scale (d e f♯ g a b c called *karṇāṭa saṃsthāna*) as the basic scale of the rāgas *kāmoda*, *kāmodī* and *khaṃmāicī* (= *khamāj*?). This was apparently the final form of the scale which may have been the forerunner of the famous *khamāj* ṭhāṭ of Hindustānī music and its Karṇāṭak equivalent the *harikāmbhoji* mela.

Bilāval (Sanskrit *velāvalī*) is also a very old rāga, but its scalar structure has undergone certain changes in the course of time. Its present scale (*ṭhāṭ*) goes back to the sixteenth century, when Puṃḍarīkavitthala[115] listed *velāvalī* rāga under his *kedāra* mela (d e f♯ g a b c♯). The ancient predominant (*aṃśa*) *dha* has retained its position as central note (*vādin*) in one particular modern Hindustānī *bilāval* variety, called *alhaiyabilāval*.[116] From the

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[108] RāmSM. 4, 61 f.
[109] PuṃḍRM. p. 12.
[110] SomRV. 3, 51 and 4, 34.
[111] ŚrīRK. 2, 157.
[112] AhSP. 410, no. 52, *kāmbodhī*.
[113] HṛdHK. p. 5.
[114] LocRT. p. 7.
[115] PuṃḍRM. p. 12.
[116] Compare BhātKPM. 2, 75.

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sixteenth century[117] onwards all authors consider *velāvaḷi* to be a morning rāga.

Kalyān did not exist in ancient times. It is first mentioned by Puṃḍarīkavitthala[118] as being a rāga and mela consisting of the notes d e f♯ g♯ a b♭ c♯. This scale is only slightly different from the modern *kalyān* ṭhāṭ d e f♯ g♯ a b c♯. After Puṃḍarīkavitthala *kalyān* is always referred to as a mela, but is known by different names, viz. *kalyāṇa*, *imaṇa*, *imaṇa kalyāṇa*, *śāntakalyāṇī*, *mecakalyāṇī*. The major sixth of this scale was introduced by Śrīkaṇṭha.[119] In the case of the rāga, a distinction should be made between *kalyān* (*kalyāṇa* or *śuddhakalyāṇa*) and *yaman* (*imana kalyāṇa*), which has its equivalent in the South Indian *yamuna kalyāṇa*.

Although *pūrva* means "ancient, old, traditional", the rāga *pūrvī* is not mentioned before the sixteenth century. This seems strange, more especially as the scale of the modern Hindustānī *pūrvī* ṭhāṭ would correspond fairly well with the ancient *madhyamagrāma* if *kākalī ni* and *antara ga* are added: d e♭ f♯ g♯+ (= a♭-) b♭- c♯, in modern equivalents: d e♭ f♯ g♯ (= a♭) b♭ c♯. The first author to mention the rāga *pūrvī* is Puṃḍarīkavitthala.[120] His *pūrvī*, which he lists under the *gauḍī* mela (d e♭ f♯ g a b♭ c♯) and which has no augmented fourth (*ma tīvra* = g♯), developed later into the Karṇāṭak *pūrvī*. The modern Hindustānī *pūrvī* with its characteristic augmented fourth is obviously based on Ahobala's *pūrvī-sāraṅga*.[121] That fourth also appears in Hṛdayanārāyaṇadeva's 4-vikṛta mela no. 3 (d e f♯ g♯ a b♯ c♯, the basic scale of his rāga *pūrva*)[122] and in Locana's *pūrvā* mela (d e f♯ g♯ a b c♯).[123] The last mentioned two basic scales have however a major second (*ri* = e) and an augmented sixth (*tīvratama dha* = b♯) or a major sixth (*dha* taking one śruti from *ni*, i.e. *catuḥśruti dha* = b), which do not occur in the modern Hindustānī *pūrvī*. The latter has the same central note (*vādin*) *ga* and prescribed time of performance (night) as in Ahobala's days.[124]

In the case of the *āsāvarī rāga* and *ṭhāṭa*, Bhātkhaṇḍe did not follow the North Indian tradition referred to by Ahobala, Hṛdayanārāyaṇadeva and Locana[125] who, like the sixteenth century author Puṃḍarīkavitthala,[126]

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[117] Compare RāmSM. 5, 50.
[118] PuṃḍRM. p. 15, no. 46.
[119] ŚrīRK. 2, 163.
[120] PuṃḍRM. p. 11, no. 18.
[121] Compare AhSP. 450.
[122] Compare HṛdHP. p. 14, no. 72.
[123] LocRT. p. 8.
[124] AhSP. 450.
[125] AhSP. 442, no. 82; HṛdHP. p. 12, no. 57; HṛdHK. p. 5, 45; LocRT. App.
[126] PuṃḍRM. p. 10, no. 9.

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listed *āsāvarī* under the *gauri* (= *mālavagaula*) *mela* or *saṃsthāna*: d e♭ f♯ g a b♭ c♯. *Bhātkhaṇḍe's āsāvarī* rāga has the scale d e(♭) f g a b♭ c in which *komal ri* occurs incidentally, whereas, in contradistinction to the *bhairavī* ṭhāṭ, the *āsāvarī* ṭhāṭ has only *śuddha ri* (e). Bhātkhaṇḍe's *āsāvarī* is obviously based on the Karṇāṭāk *asāverī* rāga listed under mela no. 8, i.e. *hanumatoḍi* mela: d e♭ f g a b♭ c. This is the same *asāverī* (= *asāvarī*) that is referred to by the Karṇāṭak authors Veṅkaṭamakhin and Govinda.[127] These authors[128] also mention a rāga named *sāverī* which, though being listed under the *māyamālavagaula* melā (d e♭ f♯ g a b♭ c♯), omits the same notes (i.e. *ga* and *ni*) in the ascent as the rāga *asāverī* or *asāvarī*. Govinda,[129] however, refers to a third variety, namely to the pentatonic *śuddhasāverī* rāga (devoid of *ga* and *ni*) listed under the *dhīraśaṃkarābharaṇa* mela (d e f♯ g a b c♯). This *sāverī* obviously dates back to Rāmāmātya's *sāverī* rāga[130] of the *sāraṅganāṭa* mela, which has the same scale as the later *dhīraśaṃkarābharaṇa*. In 1609 Somanātha[131] also refers to this *sāverī* rāga, listing it under his *mallāri* mela, which is also identical with *śaṃkarābharaṇa*. Tulaja,[132] on the other hand, listed both the *sāverī* and the *śuddhasāverī* under the *mālavagaula* mela (d e♭ f♯ g a b♭ c♯). Ahobala[133] did the same with the rāgas *sāverī* and *āsāvarī*, although he speaks of *gauri* instead of *mālavagaula* mela. In the history of Indian music *asāvarī* (*asāverī*) and *sāverī* apparently became mixed up. In the modern Hindustānī *āsāvarī*, *dha* is the most important note (*vādin*), while in the modern Karṇāṭak *asāverī*, *sa* functions as the predominant, initial and final note. Ahobala[134] mentions *dha* as the predominant note (*aṃśa*) of *āsāvarī*. However, according to the ancient tradition laid down in the Saṃgītaratnākara,[135] *ma* was the *aṃśa*, while *dha* was merely the final note of the hexatonic variety of *sāvarī*. In ancient times[136] there was also a rāga *sāverī* which had *dha* as *aṃśa*. Both these ancient rāgas are referred to as secondary rāgas (*rāgāṅga*) of *raganti*, a *bhāṣā* (i.e. a local secondary rāga) springing from the parent rāga *kakubha*, having *dha* as predominant, initial and final note, and probably containing the notes d e f g a b c.

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[127] VeṅkCPApp. mela 8, no. 3; GovSC. p. 23.
[128] VeṅkCPApp. 15, 23; GovSC. 3, 15, 1.
[129] GovSC. p. 180.
[130] Compare RāmSM. 5, 64.
[131] SomRV. 4, 40.
[132] TulSS. p. 84 and 87.
[133] AhSP. 442 f., rāgas 82 and 83.
[134] AhSP. 442, no. 82.
[135] ŚārṅSR. 2, 2, 111.
[136] Compare KuSR. 2, 2, 3, 85-87.

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The eight basic scales the historical development of which has been discussed before are all found in Locana's Rāgataraṅginī, but they are only eight of the ten modern Hindustānī *ṭhāṭs*. The remaining two, *toḍī* and *mārva*, do not resemble any of Locana's twelve *saṃsthānas*.

Of these two ṭhāṭs, *toḍī* (d e♭ f g♯ a b♭ c♯) which shows Arabic influence (cf. note 79) may also be connected with the *toḍīvarālī* mentioned by Ahobala[137] and Śrīnivāsa.[138] This seventeenth century *toḍīvarālī* was evidently the Karṇāṭak *toḍī* combined with the note *varālimadhyama* (i.e. the ancient *triśruti pa*, in later times called *cyutapañcama ma* = g♯) taken from the Karṇāṭak *śuddhavarāli* mela described by Veṅkaṭamakhin and Rāmāmātya.[139] The note *tīvra ni* (c♯) was a later addition and is referred to in Pratāpasiṃha's eighteenth century work the Saṃgītasāra.[140]

The Hindustānī *mārva* ṭhāṭ (d e♭ f♯ g♯ a b c♯, from which *pa* = a is omitted in the rāga *mārva*) gives the impression of being a mixture of the seventeenth century *maru* listed by Puṃḍarīkavitthala[141] under his *gauḍi* (= *mālavagauḍa*) mela (d e♭ f♯ g a b♭ c♯) and the *maru* listed under the *kedāra* mela (d e f♯ g a b c♯) mentioned by Hṛdayanārāyaṇadeva and Locana.[142] The origin of the *prati ma* (g♯) is however ambiguous. There may possibly be some relation between the *mārva* (or *māravikā*) and another Hindustānī rāga called *mālavi*, the basic scale of which (*pūrvī*: d e♭ f♯ g♯ a b♭ c♯) corresponds with the ancient *ṭakkakaiśika* (d e⁻ f♯ g a⁻ b⁻ c♯, or in modern equivalents d e♭ f♯ g g♯ b♭ c♯), which was the parent rāga of the ancient *mālava* rāgas.

The modern Hindustānī system of ten basic scales (*ṭhāṭs*) introduced by Bhātkhaṇḍe is a useful method of arranging the vast field of Indian rāgas according to their scalar structure. Nevertheless it must be admitted that this classification does not hold for the pentatonic and hexatonic rāgas. Owing to the omission of one or two notes it is not possible to list these rāgas under any particular heptatonic scale. Even a study of the historical development of these rāgas is of little avail, since in the history of North Indian music rāga classification changed too often. It is advisable to treat the pentatonic and hexatonic rāgas as separate categories.

Nowadays some North Indian musicians, as for instance Ravi Shankar, are inclined to adopt the South Indian classification of 72 basic scales

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[137] AhSP. 392.

[138] ŚrīRV. 7, 79. The Rāgatattvavibodha is a contemporary work, which summarizes the rāga definitions given in the Saṃgītapārijāta.

[139] VeṅkCP. 4, 155; RāmSM. 4, 43-45.

[140] PrātSS. 7, p. 192 f.

[141] PuṃḍRM. p. 10, no. 11. Compare also VeṅkCPApp. 15, 22; TulSS. p. 83; GovSC. 3, 15, 14.

[142] HṛdHK. p. 16, no. 52 and LocRT. p. 7.

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(*melas*). For my part I doubt whether any appropriate scale system can be devised to cover all the Indian rāgas. Fundamentally speaking these have always been freely improvised melodic patterns based on a particular mode (ancient *jāti*) and mood (*rasa*), and were not primarily determined by their basic scales, but first and foremost by their characteristic notes, that is to say by their predominant (*aṃśa*) or central (*vādin*) notes stressed by prolongation or frequent use, by their secondary notes touched lightly (*alpa*) or omitted altogether (*varjya*), by notes that were consonant (*saṃvādin*) with the central note (*vādin*) and shared the function (*aṃśa*) of that note, by notes that were dissonant (*vivādin*) with the central note and thus produced a contrasting effect, and sometimes by notes that could not be produced consecutively as in a scale but only in a round-about way (*vakra*). These characteristic notes or rather modal essentials (*lakṣaṇa*) of a rāga invariably form a specific melodic line known as the basic melody of a rāga — the *rāga-saṃcāra* of Karṇāṭak music and the *pakaḍ* of Hindustānī music.

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CHAPTER THREE

RHYTHM

During the last two thousand years Indian rhythm, which is the very backbone of Indian music, has developed the most elaborate and intricate systems that confuse even the trained ear of a Western musician. On the one hand Indian rhythm (*tāla*) serves as a rhythmical framework for the melodic structure of a composition, in which function it provides an indispensable foundation for the improvised melodic variations; on the other hand, it amounts to a composition in its own right. Just as a *rāga* is not merely a scale but includes characteristic motifs and melodic phrases, so is a *tāla* not merely a cycle of beats but includes characteristic rhythmic patterns and phrases. Beside the standard phrase (*ṭheka*) of a particular tāla we may distinguish general types of phrases such as: the *mukhra*, a phrase used to replace the last part of the ṭheka; the *mohra*, also used to replace the last part of the ṭheka but based on a rhythmic and melodic pattern that is repeated thrice and called *tihai*; the *kaida*, a rhythmic phrase generally covering one complete rhythmic cycle (*tāla-āvarta*), used as a starting point for improvisation; the *paran*, a small rhythmic composition consisting of two or more āvartas and containing various patterns and phrases, not used as a basis for further improvisation; and the *tukra*, a rhythmic composition consisting of one or more āvartas and ending in a tihai, designed for the purpose of displaying different techniques including syncopated rhythms.

The independent character of rhythm becomes apparent in drumsoli and in improvisations where the drummer (i.e. the *tablā-*, *pakhvāj-*, *mṛdaṅgam-* or *ghaṭam-* player) makes variations on a rhythmic pattern, while the melody is presented in its simplest form by the other instrumentalist(s) or vocalist(s).

As melody (*rāga*) is based on a particular scale consisting of a particular number of notes (i.e. specific pitches) within the octave, so rhythm (*tāla*) is based on a particular series or cycle consisting of a particular number of beats (i.e. time units) within a certain time space.

Unlike Western music, Indian music has never forced its rhythm into such an over-simplified system as the Western musical metre, which may have become necessary in order to counterbalance the complicated harmonic and melodic structures of Western music. It is true that simple $^{3}/_{4}$, $^{4}/_{4}$ and $^{6}/_{8}$

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metres also exist in Indian music ($^3/_4$ is comparable to the Karṇāṭak *sudha*, i.e. the *tisra jāti* of *eka tāla*; $^4/_4$ and $^6/_8$ to the Hindustānī *kharvā* and *dādrā* respectively). However, alongside these simple metres a vast number of composite metres are used in both North and South Indian music. The *tāla* cycle then consists of a relatively high number of beats or time units (*akṣara*, or *mātrā*) arranged in sections (*aṅga* or *vibhāga*) of 2, 3, 4 or more beats. The first beat of each section is either stressed (*tāli*, which is marked by a number) or unstressed (*khali*, indicated by a zero), while the first beat of the most important section, the so-called *sam* (marked x), has a special accent. In Karṇāṭak music the main beat, i.e. the *sam* of Hindustānī music, is called *ghāta*; the other stressed beats in a tāla cycle are known as *talam*; and the unstressed beats are named *visarjita*, *viccu* or *vissu*. Both Karṇāṭak and Hindustānī tālas can be indicated by means of numbers representing the number of beats occurring in each section of the cycle. When counting the beats of a Hindustānī tāla according to this method, the number of beats in the unstressed (*khali*) section(s) or bar(s) should be added to the number of beats in the preceding stressed section or bar.
For example:

Hindustānī *cautāl*:

													Karṇāṭak *lekha*, i.e.
x		0		2		0		3		4			*catusra jāti* of *aṭatāla*
1	2	3	4	5	6	7	8	9	10	11	12	=	4 + 4 + 2 + 2

Indian music has evolved special handmovements to point out the rhythmical structure of the different tālas and this means of indication is not confined to purposes of study. Even at a public performance one of the accompanying musicians may disclose, in this way, how the tāla is constructed. The main beat (*sam*) is marked by a normal clap of the hands or by a slap of the right hand on the thigh; the stressed first beats of the other sections by a softer clap of the hands or slap on the thigh; and the unstressed first beats (*khali*) of Hindustānī music — in Karṇāṭak music some of the untressed beats — by a wave of the right hand or by a soft clap with the palm of the right hand facing upwards. The other beats are counted with the fingers of the right hand alternately touching the thumb or marked by soft claps. A somewhat similar, but more complicated system of beating time existed in ancient times.

In the old *mārgatāla* system each *mātrā* (= *laghu*, lit. "short syllabe", marked by the symbol I, in the ancient period the smallest time unit) was

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indicated by one of the seven handmovements (*pāta*).[1] Four of these *pātas* were called "silent" (*niḥśabda*): the *āvāpa*, a contraction of the fingers with the palm of the hand facing upwards; the *vikṣepa*, a swift movement of the hand from the left to the right side with the palm facing upwards (equivalent to the *khali* of modern Hindustānī music); the *praveśa*, a contraction of the fingers with the palm of the hand facing downwards; and the *niṣkrāma*, a stretching movement of the fingers with the palm again facing downwards. Three *pātas*, on the other hand, were called "audible" (*śabdena saṃyukta*), viz.: the *saṃnipāta*, a clap produced by both hands, which has its counterpart in the modern Hindustānī *sam* and the Karṇāṭak *ghāta*; the *tāla*, a clap by the left hand (probably on the immobile right hand or on the thigh); and the *śamyā*, a clap by the right hand (probably on the immobile left hand or on the thigh). In modern times, however, a slap by the right hand on the thigh is called *tāli* in Hindustānī music and *tālam* in Karṇāṭak music, whereas the ancient *tāla* was a left handed clap.[2]

In the ancient period, the time units (*akṣara*, lit. meaning "syllable") counted as beats were equated to the *laghu*, i.e. "short" syllable of poetical metre, also called *mātrā* and indicated by the symbol I. Two more values were used in the ancient tālas, namely the *guru*, i.e. the long syllable of poetical metre (indicated by S), which was equal to two laghus (S = II), and the *pluta*, i.e. the extra long syllable (indicated by Ṡ or 2), which was equal to three laghus (Ṡ = III). As in European music so also in Indian music shorter units of time gradually came into use. During the early Middle Ages, that is to say in about the seventh or eighth centuries when the *deśītālas* were introduced, the *druta*, which is half a *laghu* (indicated by O), becomes a constituent element of tāla. The author of the Saṃgītamakaranda (dating from the thirteenth century)[3] refers to a still shorter time unit called the *anudruta*, i.e. half a *druta* (indicated by ᴗ). Nowadays these *anudrutas* are the *akṣaras*, or *tālākṣaras*, i.e. the basic time units which determine a tāla, while some longer values such as the *guru* and the *pluta* have fallen into disuse in the same way as the *longa* and *maxima* of older European music.

The ancient system of *mārgatālas*, first discussed in the Nāṭyaśāstra[4] and then referred to in many later musical treatises,[5] was based on the following five tālas:

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[1] Cf. Vāyu Purāṇa 87, 41; BhN. 31, 33 f. (Bombay and Baroda editions).
[2] Cf. ŚārṅSR. 5, 7-10; BhN. 31, 33-37 (Bombay and Baroda eds.).
[3] Cf. NārSM. 2, 3, 96-99.
[4] BhN. 31, 10 f. (Bombay ed.); 31, 8 f. (Baroda ed.).
[5] ŚārṅSR. 5, 20-30; PārśSS. 7, 44 f.; SudhSS. 2, 71 f.; NandBh. (7), 437 f.; JagSC. p. 10 and 34; ŚrīRK. 4, 144 f.

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caccatpuṭa	S S I Ṡ
cācapuṭa	S I I S
ṣaṭpitāputraka	Ṡ I S S I Ṡ
udghaṭṭa	S S S
saṃpakkeṣṭāka	Ṡ S S S S Ṡ

This relatively small number of tālas could be produced in three different ways (*mārga*), because the *guru* (S) was considered to be a variable time value. In fast speed (*druta laya*), it counted as a single *kalā* (*ekakala*) containing two *laghu-mātrās* or basic units of time (*tālākṣara*); in medium speed (*madhya laya*), it counted as a double *kalā* (*dvikala*) containing four *laghu-mātrās*; and in slow speed (*vilambita laya*), it counted as a quadruple *kalā* (*catuṣkala*) containing eight *laghu-mātrās*. These three ways (*mārga*) of performing the *mārgatālas* are respectively called *citra*, *vṛtti* (or: *vārttika*) and *dakṣiṇa*. A similar phenomenon is found in Western music. There too, relatively long notes (𝅗𝅥 or ♩) are used as basic units of time in fast tempo, while in slow tempo the short notes (♪ or 𝅘𝅥𝅯) may become the basic units of time. In modern Karṇāṭak music the *anudruta* is regarded as having a variable time value, which may become *ekakala*, *dvikala* or *catuṣkala*, i.e. respectively containing one, two or four smaller units of time. This means that the *anudruta* notes or basic units of time (*tālākṣara*), the number of which determines the tāla, can be split up into one, two or four smaller time units (*kalā*) to be marked by the drummer and counted as separate beats.

In the early Middle Ages, when the ancient melody system of *grāmarāgas* had developed into a new rāga system in which traditional music had assimilated local melodies (*deśīrāgas*), the ancient rhythmical system of *mārgatālas* expounded in the Nāṭyaśāstra was replaced by a system of numerous *deśītālas*. As a rule 108 *deśītālas* are mentioned, but the structure of these tālas differs slightly from one author to the other.[6]

Although it is not possible within the scope of this volume to discuss all these *deśītālas*, it is interesting to see how the modern Indian tālas developed from this vast field of traditional rhythms. First we may consider the Karṇāṭak tālas, which have been systematically arranged in a system of 35 tālas. This so-called *sulādi* system, which according to Josef Kuckertz[7] only dates from the seventeenth century, is most probably based on an older tradition, since the seven main tālas *dhruva*, *maṭ(h)ya*, *rūpaka*, *jhampa*, *tripuṭa*, *aṭa* and *eka* — each of which has five varieties in the modern *sulādi* system — are already mentioned in Dāmodara's Saṃgītadarpaṇa (approxi-

[6] Compare Aum., JagSC., NandBh., ŚārṅSR. and SudhSS.

[7] Form und Melodiebildung der Karnatischen Musik Südindiens, I, Wiesbaden 1970, p. 60.

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mately dating from the sixteenth century)[8] as the *sūḍādi* tālas: *rati* (in common practice called *dhruva*), *jagaṇamaṇṭha*, *rūpaka*, *jhampa*, *aḍḍatāla*, *ṭṛtīya* (= modern *tripuṭa*) and *ekatāla*. The term *sūḍādi* possibly derives from *sūḍa-ādi*, "*sūḍa*, etc.", and refers to the three ancient classes of *prabandha* compositions[9] called *sūḍa*, *āli* and *viprakīrṇa*. So the *sūḍāditālas* may originally have been special tālas used in the "*sūḍa* and other" ancient types of *prabandha* compositions.

In the ancient period the *dhruva* was one of the *sālaga-sūḍa-prabandha* compositions (*sālaga* = *chāyālaga*,[10] i.e. "mixed"). The sixteen varieties of this *dhruva* composition[11] called *jayanta*, *śekhara*, *utsāha*, *mādhura*, *nirmala*, etc., were executed in nine different tālas, that is to say each variety was executed in one of the following nine ancient tālas:

āditāla[12]	I	= 4 (i.e. four anudrutas)
niḥsāruka[13]	I Ì	= 4 + 6 or: 4 + 4 + 2
pratimaṇṭha[14]	I I S S I I	= 4 + 4 + 8 + 8 + 4 + 4
hayalīla[15]	I S I	= 4 + 8 + 4 or: 0 0 S I = 2 + 2 + 8 + 4
krīḍātāla[16]	Ò Ò	= 3 + 3
laghuśekhara[17]	Ì	= 6 or: 4 + 2
jhampa[18]	Ò Ò I	= 3 + 3 + 4
ekatāli[19]	0	= 2
dvitīya[20]	0 0 I	= 2 + 2 + 4

None of these ancient tālas corresponds to the *dhruvaka*,[21] which is the first of Dāmodara's seven *sūḍādi* tālas. This *dhruvaka* is apparently synonymous with the ancient *ratitāla*.[22] The modern Karṇāṭak *dhruva tāla*, which contains 14 beats (4 + 2 + 4 + 4), can be traced in another sixteenth century work, Śrīkaṇṭha's Rasakaumudi, which describes[23] *dhru-*

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[8] Edited by K. Vasudeva Sāstrī, Madras 1952, no. 34 of Saraswathi Mahal Series, p. 153 f.
[9] Cf. ŚārṅSR. 4, 22 f.
[10] ŚārṅSR. 4, 311 f.
[11] ŚārṅSR. 4, 319 f.
[12] ŚārṅSR. 5, 261.
[13] ŚārṅSR. 5, 279.
[14] ŚārṅSR. 5, 296.
[15] JagSC. p. 25; Aum. p. 42.
[16] ŚārṅSR. 5, 281.
[17] ŚārṅSR. 5, 293.
[18] ŚārṅSR. 5, 294.
[19] ŚārṅSR. 5, 290.
[20] ŚārṅSR. 5, 261.
[21] DāmSD. p. 153.
[22] ŚārṅSR. 5, 296.
[23] ŚrīRK. 4, 151.

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vaka tāla as I I I = 4 + 4 + 4 + 2 or: 4 + 4 + 6. The only difference between this tāla and the modern Karṇāṭak *dhruva* is that the series of six beats appears at the end of Śrīkaṇṭha's *dhruvaka*, whereas in its modern equivalent this series is placed at the beginning of the rhythmic cycle. In the twelfth century Jagadekamalla[24] refers to an identical rhythm, but calls it *dombilī*. The thirteenth century author Nandikeśvara[25] speaks of it as *jhombaḍa*.

The ancient *maṇṭha*, which was also a *sālaga-sūḍa-prabandha* composition,[26] had six different varieties called: *jayapriya*, *maṅgala*, *sundara*, *vallabha*, *kalāpa* and *kamala*. Each of these varieties was executed in a different kind of *maṇṭha tāla*. This ancient tāla is mentioned by Śārṅgadeva and several other authors as having the structure:[27] I I S I I I I. In each of the six varieties of the ancient *maṇṭha prabandha* composition the first part (I I S) of this tāla changes. The rhythm I S I (*jagaṇa*) is said to be the "essential feature" (*ātman*) of the *maṇṭha tāla* in the first *maṇṭha-prabandha* variety called *jayapriya*, similarly S I I (*bhagaṇa*) in the second variety (*maṅgala*), I I S (*sagaṇa*) in the third (*sundara*), S I S (*ragaṇa*) in the fourth (*vallabha*), I I I (*nagaṇa-virāmanta*, i.e. *nagaṇa* with a *virāma* at the end) in the fifth (*kalāpa*) and O O I (*virāmāntadrutadvandvāllaghu*) in the sixth (*kamala*). The essential part (S I S) of the ancient *maṇṭha tāla* used in the fourth variety (*vallabha*) of the ancient *maṇṭha-prabandha* composition appears to be analogous to the modern Karṇāṭak *maṭhya tāla* (S I S = 4 + 2 + 4) and its Hindustānī equivalent *sūlaphāktā* (4 + 2 + 4).

In the ancient period the *rūpaka* was also a type of *prabandha* composition. Unfortunately Śārṅgadeva's description[28] is somewhat vague as no particular tāla is specified for it. Moreover Śārṅgadeva makes no reference whatsoever to *rūpaka tāla*, neither in the context of the *rūpaka prabandha* nor in the chapter on *tālas*. Nevertheless *rūpaka tāla* probably did exist in the ancient days, since it is defined by the twelfth century author Jagadekamalla[29] as a tāla with the structure S S I I = 8 + 8 + 4 + 4, and by a still earlier authority[30] as S I I = 8 + 4 + 4. However, in course of time *rūpaka tāla* underwent considerable change. In the sixteenth century Śrīkaṇṭha[31] describes *rūpaka tāla* as: O I, a rhythm corresponding to the

[24] JagSC. p. 65.
[25] NandBh. 478.
[26] Cf. ŚārṅSR. 4, 314; in details: 4, 338.
[27] ŚārṅSR. 5, 277 f.; JagSC. p. 62; NandBh. 461; ŚrīRK. 4, 150; DāmSD. p. 138.
[28] ŚārṅSR. 4, 361 f.
[29] JagSC. p. 31.
[30] Aum. p. 43.
[31] ŚrīRK. 4, 150.

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main variety of the modern Karṇāṭak *rūpaka tāla*. Dāmodara's *rūpaka tāla*[32] (0 Ò = 2 + 3), on the other hand, which is slightly different, is obviously the forerunner of the modern Karṇāṭak *tisra* variety of *rūpaka tāla* (2 + 3). Elsewhere[33] Dāmodara calls this tāla *caṇḍaniḥsāruka* or *kriḍātāla* and other authorities[34] too refer to these names in connection with the rhythm 0 Ò. The rhythm of the *catusra* variety of *rūpaka tāla* (0 I = 2 + 4) also occurs in the ancient tāla system described in the Ratnākara, although it is there named *yatilagna*.[35]

The ancient *jhampa tāla*,[36] which invariably denotes the rhythm 0 Ò I = 2 + 3 + 4 or: 2 + 7, was especially used in the *kalahaṃsa prabandha*,[37] a composition of the *ali-prabandha* class,[38] but also in a particular variety of the *dhruvaprabandha* composition[39] belonging to the *sālaga-sūḍa-prabandha* class of compositions. The same rhythm, though called by a different name (*kamala*), is mentioned in the Saṃgītadarpaṇa.[40] The modern Karṇāṭak *jhampa tāla* (7 + 1 + 2) differs from its ancient form in that it has ten instead of nine beats, while the series of seven beats occurring at the end of the ancient tāla cycle appears at the beginning of the tāla cycle in the modern *jhampa*.

According to Śārṅgadeva the ancient tāla named *aḍḍatālī* was used in the *aḍḍatāla-prabandha*,[41] a composition of the *sālaga-sūḍa-prabandha* class. There is some confusion about the structure of this tāla, since Śārṅgadeva himself states[42] that *aḍḍatālī*, also known as *tripuṭa*, has one *druta* and two *laghus* 0 I I, whereas all other authors state that this tāla has two *drutas* and two *laghus* 0 0 I I. On the whole this rhythm corresponds with the structure of the modern Karṇāṭak *catusra* variety of *aṭatāla* (4 + 4 + 2 + 2) and its Hindustānī equivalent *cautāl* (= *cārtāl* or *dhrupad*), the only difference being that in these modern Indian tālas the two series of four beats occurring at the end of the ancient *aḍḍatālī* are placed at the beginning of the cycle.

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[32] DāmSD. p. 154.
[33] DāmSD. p. 139.
[34] ŚārṅSR. 5, 281; SudhSS. 2, 47; JagSC. p. 14 and 48; NandBh. 464.
[35] ŚārṅSR. 5, 266.
[36] Cf. ŚārṅSR. 5, 294; JagSC. p. 17, 49 and 65; SudhSS. 2, 50; NandBh. 483; ŚrīRK. 4, 151; DāmSD. p. 143 and 154.
[37] ŚārṅSR. 4, 242.
[38] ŚārṅSR. 4, 26.
[39] ŚārṅSR. 4, 324.
[40] DāmSD. p. 162.
[41] ŚārṅSR. 4, 348.
[42] ŚārṅSR. 5, 306.

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Śārṅgadeva's *tripuṭa*, which is synonymous with *aḍḍatālī*, should not be confused with the modern Karṇāṭak *tripuṭa*. This tāla, or rather its *tisra* variety (3 + 2 + 2) which has its equivalent in the Hindustānī *tivra tāla*, may have developed out of the ancient *tṛtīya tāla* traditionally described[43] as O O Ò = 2 + 2 + 3. The final series of three beats occurring in the ancient tāla is now placed at the beginning of the cycle in its modern equivalents.

In ancient times *ekatālī* was especially used in the *ekatālī prabandha*[44] listed under the *śuddha-sūḍa-prabandha*[45] or *sālaga-sūḍa-prabandha*[46] class of compositions. Up to the sixteenth century *ekatālī* (or *ekatāla*) is always defined as a rhythm consisting of one *druta* (O), which is equal to two *anudrutas* (u u). In modern times, however, the number of beats in this tāla has been doubled. The modern Karṇāṭak *catusra* variety of *ekatāla* contains four *anudruta* beats. The modern Hindustānī *ektāl*, which has twelve beats (4 + 4 + 2 + 2), can be traced back to the sixteenth century *ekatāla* which, according to Dāmodara,[47] has the structure I O I = 4 + 2 + 6, or 4 + 2 + 4 + 2. Here part of the final series of 6 beats, that is to say the last series of 4 beats, may have moved to the beginning of the cycle.

This transference of a series of beats from the end of the rhythmic cycle in the older tāla form to the beginning of the cycle in its modern tāla equivalent may be due to changed opinion regarding the position of the main beat (*sam*) in the cycle. In modern Indian music this especially stressed beat mostly occurs at the beginning of the rhythmic cycle, whereas in the ancient *mārgatālas*[48] the *saṃnipāta* (abbr. *saṃ*) generally falls on the last *gurukalā*, i.e. the changeable time unit which, according to the speed of execution, contains 2, 4 or 8 *laghumātrās* as basic units of time.

The above mentioned Karṇāṭak tālas, the historical development of which can be traced in both ancient and modern musical treatises, are only the main representatives of the seven categories of the modern Karṇāṭak tāla system. Since each category has five subdivisions, the whole system comprises thirty-five different tālas which, beside their class name, also have individual names. The general terms indicating the five varieties, viz. *tisra* ("threefold"), *caturaśra* ("fourfold"), *khaṇḍa* ("broken"), *miśra* ("mix-

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[43] JagSC. p. 17; ŚārṅSR. 5. 261; ŚrīRK. 4, 149; DāmSD. p. 133 and 154.
[44] ŚārṅSR. 4, 24.
[45] ŚārṅSR. 4, 180.
[46] ŚārṅSR. 4, 356 f.
[47] DāmSD. p. 154.
[48] Compare ŚārṅSR. vol. III, pp. 17 and 20.

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ed") and *saṃkīrṇa* ("composite") refer to the structure of, or more precisely to the number of beats contained in the main bar or section (*aṅga*) of a particular tāla cycle. The term *tisra* may derive from *tryaśra* which, like *caturaśra*, was already used in ancient times. In the Nāṭyaśāstra[49] the ancient mārgatālas *caccatpuṭa* (consisting of four *kalās*) and *cācapuṭa* (consisting of three kalās) are respectively called *caturaśra* and *tryaśra*. In the same work[50] however, *miśra* and *saṃkīrṇa* are only used as synonyms both indicating tālas consisting of 5, 7, 9, 10 or 11 *kalās*. In the Saṃgītacūḍāmaṇi (dating from the twelfth century)[51] the term *khaṇḍa* obviously refers to tālas in which the bars or sections (*aṅga*) were "split up" (*khaṇḍa*) into smaller time units such as the *druta* and *anudruta*. Śārṅgadeva[52] mentions *khaṇḍa* in connection with the *deśītālas*.

In modern times the *anudruta* symbol ∪ indicates 1 beat or *akṣarakāla*, i.e. the smallest unit of time, the *druta* (O) 2 beats, while the *laghu* (I) may indicate 3, 4, 5, 7 or 9 beats. In older notation 3 *akṣarakālas* were indicated by the symbol Ŭ, 4 by I, 5 by Ĭ, 7 by I̯, and 9 by Š.

The following table[53] is to elucidate the modern Karṇāṭak system of 35 tālas:

class	variety	name	symbols	number of beats
dhruva	tisra	maṇi	$I_3\ O\ I_3\ I_3$	3 + 2 + 3 + 3
	caturaśra	śrīkara	$I_4\ O\ I_4\ I_4$	4 + 2 + 4 + 4
	khaṇḍa	pramāṇa	$I_5\ O\ I_5\ I_5$	5 + 2 + 5 + 5
	miśra	pūrṇa	$I_7\ O\ I_7\ I_7$	7 + 2 + 7 + 7
	saṃkīrṇa	bhuvana	$I_9\ O\ I_9\ I_9$	9 + 2 + 9 + 9
maṭhya	tisra	sāra	$I_3\ O\ I_3$	3 + 2 + 3
	caturaśra	sama	$I_4\ O\ I_4$	4 + 2 + 4
	khaṇḍa	udaya	$I_5\ O\ I_5$	5 + 2 + 5
	miśra	udīrṇa	$I_7\ O\ I_7$	7 + 2 + 7
	saṃkīrṇa	rāva	$I_9\ O\ I_9$	9 + 2 + 9
rūpaka	tisra	cakra	$O\ I_3$	2 + 3
	caturaśra	patti	$O\ I_4$	2 + 4
	khaṇḍa	rāja	$O\ I_5$	2 + 5
	miśra	kula	$O\ I_7$	2 + 7
	saṃkīrṇa	bindu	$O\ I_9$	2 + 9

[49] BhN. 31, 9 and 11 (Bombay ed.).
[50] BhN. 31, 23 f. (Baroda ed.).
[51] JagSC. p. 6 f., verse 48 f.
[52] ŚārṅSR. 5, 42.
[53] Compare P. Sambamoorthy, South Indian Music, II, Madras ⁷1968, p. 22-25.

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jhampa	tisra	kadamba	I_3 ∪ 0	3 + 1 + 2
	caturaśra	madhura	I_4 ∪ 0	4 + 1 + 2
	khaṇḍa	caṇa	I_5 ∪ 0	5 + 1 + 2
	miśra	sura	I_7 ∪ 0	7 + 1 + 2
	saṃkīrṇa	kara	I_9 ∪ 0	9 + 1 + 2
tripuṭa	tisra	śaṅkha	I_3 0 0	3 + 2 + 2
	caturaśra	ādi	I_4 0 0	4 + 2 + 2
	khaṇḍa	duṣkara	I_5 0 0	5 + 2 + 2
	miśra	līla	I_7 0 0	7 + 2 + 2
	saṃkīrṇa	bhoga	I_9 0 0	9 + 2 + 2
aṭa	tisra	gupta	I_3 I_3 0 0	3 + 3 + 2 + 2
	caturaśra	lekha	I_4 I_4 0 0	4 + 4 + 2 + 2
	khaṇḍa	vidala	I_5 I_5 0 0	5 + 5 + 2 + 2
	miśra	loya	I_7 I_7 0 0	7 + 7 + 2 + 2
	saṃkīrṇa	dhīra	I_9 I_9 0 0	9 + 9 + 2 + 2
eka	tisra	sudha	I_3	3
	caturaśra	māna	I_4	4
	khaṇḍa	rata	I_5	5
	miśra	rāga	I_7	7
	saṃkīrṇa	vasu	I_9	9

Some of the modern Hindustānī tālas could also be classified under the above mentioned Karṇāṭak categories — a procedure followed by Popley[54] — but that leaves out a considerable number of Hindūstānī tālas which do not fall within those categories. Consequently the present writer prefers to enumerate some well known and a few less common Hindustānī tālas in the alphabethic order, presenting them in the usual modern Hindustānī (transliterated) notation, whereby vertical lines mark the bars or sections (*aṅga* or *vibhāga*) of one complete rhythmic cycle (*āvarta*) of the tāla; an unbroken series of numbers written in between these lines represent all the beats or smallest time units (*mātrā*) in the cycle; and the symbols x and 0 placed over these numbers respectively indicate the *sam* and the *khali*, while the other numbers in the top line indicate the secondary stressed beats (*tāli*).

The syllables (*bol*) written under the numbers refer to particular strokes to be given by the drummer (in the following examples only *tablā* and *pakhvāj* bols are mentioned). Owing to the various styles of drumming (*bāj*), there

[54] H. A. Popley, The Music of India, Calcutta ²1950, p. 77.

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is no uniformity regarding the standard strokes and drum syllables of the tālas. Generally only the number of beats, the sections and their accentuation in a particular tāla is fixed, while the strokes and bols differ from one style to the other.

The following list[55] is to acquaint the reader with the general structure of some well known and a few less common Hindustānī tālas:

Well known Hindustānī tālas:

aḍacautāl (= *aḍacārtāl*):

x	2	0	3	0	4	
1 2	3 4	5 6	7 8	9 10	11 12	
dhin tirakiṭa	dhin nā	tun nā	kat tā	tirakiṭa dhin	nā dhin	

0	
13 14	
dhin nā	

addhā (= *sitārkhānī*):

x	2	0	3
1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16
dhā dhin . dhā	dhā dhin . dhā	dhā tin . tā	tā dhin . dhā

cautāl (= *cārtāl* or *dhrupad*):

x	0	2	0	3	4	
1 2	3 4	5 6	7 8	9 10	11 12	
dhā dhā	dhin tā	kiṭa dhā	dhin tā	tira kita	gadi gina	

dādrā:

x	0	
1 2 3	4 5 6	
dhā dhin nā	dhā tin nā	

dhamār:

	x	0	2	0	3	0	
	1 2 3	4 5	6 7	8 9 10	11 12	13 14	
	ka dhi ṭa	dhi ṭa	dhā .	ga ti ṭa	ti ṭa	tā .	
or:	dhā ge ṭa	dhi ṭa	dhā .	tā ki ṭa	ki ṭa	tā .	

[55] Viṣṇu Nārāyaṇa Bhātkhaṇḍe, Hindustānī Saṃgīt Paddhati, Kramik Pustak Mālikā, I to VI, Hathras 1964, lists of tālas following the Introduction; Nikhil Ghosh, Fundamentals of Rāga and Tāla, Bombay 1968, p. 68-70; R.M. Stewart, an Examination of the Banaras School of Tabla Performance, Hawaii, Thesis M.A. Music, 1965, p. 90-98; Bhagavatśaraṇa Śarmā, Tāla Prakāśa, Hathras 1970, p. 98-136; Satyanārāyaṇa Vaśiṣṭa, Tāla-Mārtaṇḍa, Hathras 1967.

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dhumālī:

x	2	0	3
1 2	3 4	5 6	7 8
dhā dhin	dhā tin	taka dhin	dhāge tirakiṭa

dīpcandī:

x	2	0	3
1 2 3	4 5 6 7	8 9 10	11 12 13 14
dhā dhin .	dhā dhā dhin .	tā tin .	dhā dhā dhin .

ektāl:

x	0	2	0	3	4
1 2	3 4	5 6	7 8	9 10	11 12
dhin dhin	dhāge tirakiṭa	tun nā	kat tā	dhāge tirakiṭa	dhin nā

jat:

x	2	0	3
1 2	3 4	5 6	7 8
tāka dhin	dhāga dhin	tāka tin	dhāga dhin

jhaptāl:

x	2	0	3
1 2	3 4 5	6 7	8 9 10
dhin nā	dhin dhin nā	tin nā	dhin dhin nā

jhūmrā:

x	2	0	3
1 2 3	4 5 6 7	8 9 10	11 12 13 14
dhin dhā tirakiṭa	dhin dhin dhāge tirakiṭa	tin tā tirakiṭa	dhin dhin dhāge tirakiṭa

kavvālī:

x	0
1 2 3 4	5 6 7 8
dhā dhin dhādhā tin	tā tin dhādhā dhin

kharvā:

x	0
1 2 3 4	5 6 7 8
dhā ge nā tin	na ka dhin nā

or:

x	0
1 2	3 4
dhāg tin	tāg dhin

rūpak:

1	2	0
1 2	3 4	5 6 7
dhin .	dhā ge	tin . traka

or:

0	1	2
1 2 3	4 5	6 7
tin tin nā	dhin nā	dhin nā

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sūltāl (= *sūlaphāktā*):

x	0	2	3	0
1 2	3 4	5 6	7 8	9 10
dhā dhā	dhin tā	tira dhā	tira kiṭa	gadi gina

tilvāḍā:

x	2	0
1 2 3 4	5 6 7 8	9 10 11 12
dhā tirakiṭa dhin dhin	dhā dhā dhin dhin	tā tirakiṭa tin tin

3
13 14 15 16
dhā dhā dhin dhin

tīntāl:

x	2	0
1 2 3 4	5 6 7 8	9 10 11 12
dhā dhin dhin dhā	dhā dhin dhin dhā	dhā tin tin tā

3
13 14 15 16
tā dhin dhin dhā

tivrā:

x	2	3
1 2 3	4 5	6 7
dhā dhin tā	tira kiṭa	gadi gina

Less known tālas:

āḍāpañctāl (= *āḍāpann*):

x	2	0	3	4
1 2	3 4	5 6	7 8 9 10	11 12 13
dhin tirakiṭa	dhin nā	dhin dhin	dhā dhā tun nā	katta tī dhidhī

5
14 15
nādhī dhīnā

bhānumatī:

x	2	3	4
1 2 3 4	5 6 7	8	9 10 11
dhā tira dhina naka	dhiṭa dhiṭa dhāge	tira	tina gadi gina

brahm:

x	0	2	3	0	4	5	6	0	7	8
1	2	3	4	5	6	7	8	9	10	11
dhā	tat	dhet	dhina	naka	dhet	dhet	dhina	naka	dhāge	tira

9	10	0
12	13	14
kiṭa	gadi	gina

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or :

x	0	2	3	0	4
1 2	3 4	5 6	7 8	9 10	11 12
dhā dhin	dhin dhā	traka dhin	dhin dhā	traka dhin	dhin dhā

5	6	0	7	8	9	10	0
13 14	15 16	17 18	19 20	21 22	23 24	25 26	27 28
tī tī	tā tī	tī nā	tun nā	ka tā	dhāge nadhā	traka dhin	gadi gina

gajajhampā :

x	2	0
1 2 3 4	5 6 7 8	9 10 11
dhā dhina naka taka	dhā dhina naka taka	tina naka taka dhina

3
12 13 14 15
tira kiṭa gadi gina kiṭa taka

jagajhampa :

x	2	3	4
1 2 3 4 5 6 7 8	9 10	11 12	13 14 15
dhā . dhā ge dha di ga na	dhu ma	ki ṭa	di ga na

jagapāla :

x	2	3	4
1 2 3 4 5	6 7	8 9	10 11
dhā dhina naka thuṃ nā	dhuma kiṭa	kiṭa kata	gadi gina

jaiy tāl :

x	0	2	3
1 2 3 4 5	6 7 8 9	10 11	12 13
dhin nā dhin nā tirakiṭa	tin tin nā tirakiṭa	dhin dhin	dhā taka

khemṭā :

x	0	or :	x	0
1 2 3	4 5 6		1 2 3	4 5 6
dhā dhin taka	tā tin taka		dhāge dhina gina	tāge tina kina

lakṣmī :

x	2	3	4	5	6
1	2	3 4	5	6	7 8
dhinnā	dhindhā	tirakiṭa dhinnā	dhindhā	tirakiṭa	dhādhā tirakiṭa

7	8	9	10	11	12	13	14
9	10	11	12	13	14	15	16
dhādhā	tirakiṭa	dhinnā	dhindhā	tirakiṭa	tunnā	kiṭanaga	tāge

15
17 18
tā tirakiṭa

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or :

x	2	3	4	5	6	7	8
1 2 3 4	5 6	7 8	9 10 11 12	13	14	15 16	17 18 19 20
dhā . ki ṭa	ta ka	dhu ma	ki ṭa ta ka	dhet	.	tā .	ki ṭa ta ka

9	10	11	12	13	14	15	16	17	18
21 22	23 24	25	26	27 28	29	30	31 32	33 34	35 36
dhin na	na ka	dhet	.	tā .	ki	ṭa	ta ka	ga di	gi na

matt :

x	0	2	3	0	4	5	6
1	2	3	4	5	6	7	8 9
dhā	dhina	naka	dhina	naka	tira	kiṭa	gadi gina

or :

x	0	2	3	0	4	5
1 2	3 4	5 6	7 8	9 10	11 12	13 14
dhī .	nā .	dhī tirakiṭa	dhī nā	tun nā	kat tā	tirakiṭa dhin

6	0
15 16	17 18
nā dhin	dhin nā

nišoruk :

x	2	3
1 2 3 4	5 6 7 8	9
dhin nā kiṭa taka	dhuma kiṭa taki ṭata	kā

pañcam savārī :

x	2
1 2 3 4	5 6 7
dhin.tira kiṭadhin. nā. tā.	dhīdhī nādhī dhīnā

0	3
8 9 10 11	12 13 14 15
tīnā tīnā trakatunnā kiranaga	kattā dhīdhī nādhī dhīnā

pharodast :

x	0	2	0	3
1 2	3 4	5 6	7 8	9 10
dhin dhin	dhāge tirakiṭa	tun nā	kat tā	dhina kadhā

4	5
11 12	13 14
tirakiṭa dhina	kadhā tirakiṭa

puṣṭū (= *paśto*) :

x	2	3
1 2 3	4 5	6 7
tā ka dhin	dhā dhā	dhā dhin

or :

2	3	0
1 2 3	4 5	6 7
tā ka dhin	dhā dhā	dhā dhin

or :

x	2	3
1 2 3	4 5	6 7
tin . naka	dhin .	dhā ge

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rudr tāl:

x	2	3	4	5	6	7	8	
1 2	3	4	5 6	7	8	9	10 11	
dhā tit	dhā	tirakiṭa	dhī nā	tirakiṭa	tun	nā	kat tā	

or:

x	2	3	4	5	6	7	8	9	10	11
1 2	3	4 5	6	7	8 9	10	11	12	13	
dhā dhin	tā	tira kiṭa	gadi	gina	dhā dhā	dhin	tā	tira	kiṭa	

11
14 15
tira gadi

or:

x	2	3	4	5	6	7	8	9	10	11
1 2	3 4	5	6 7	8	9	10 11	12	13	14 15	16
dhā .	ki ṭa	ta	ka dhu	ma	ki	ṭa ta	ka	ta	ka dhā	tā

or:

x	2	3	4	5	6	7
1 2	3	4 5	6	7	8 9	10
dhā dhira	naka	dhira naka	dhuma	kiṭa	dhira naka	taka

8	9	10	11
11	12	13 14	15 16 17
dhuma	kiṭa	taka dhuma	kiṭa gadi gina

savārī:

x	2	3
1 2 3 4	5 6 7 8	9 11 12
dhin nā dhin dhin	dhā dhā tin nā	kat tā dinnā kattā

4
13 14
kiṭataka tirakiṭa

or:

x	2	0
1 2 3	4 5 6 7	8 9 10 11
dhī nā dhīdhī	kata dhīdhī nādhī dhīnā	tīkra tunnā tirakiṭa tunnā

3
12 13 14 15
kattā dhīdhī nādhī dhīnā

or:

x	2
1 2 3 4 5 6 7 8	9 10 11 11 13 14 1516
dhī tā ka dhī tā ka dhī dhī	tā ka dhī dhī tā ka tī nā

3	4
17 18 19 20 21 22 23 24	25 26 27 28 29 30
tī nā tri kiṭa dhī nā dhī dhī	nā dhī dhī nā dhī nā

or:

x	2
1 2 3 4 5 6 7	8 9 10 11 12 13 14 15 16
dhī . nā . dhī . dhī	. nā . dhī dhi nā dhī dhī nā

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3							4								
17	18		19	20	21	22	23	24	25	26	27		28	29	30	31	32
tina	tirakiṭa		tina	tina	nā	nā	tun	nā	kat	tā	tirakiṭa		dhī	nā	dhī	dhī	nā

choṭī savārī:

x				2				3				4		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dhā	.	ga	di	gi	na	dhu	ma	ki	ṭa	ta	ka	dhin	na	tā

savārī baṛī:

x		0		2		0		3		
1	2	3	4	5	6	7	8	9	10	
dhī	nā	dhī	nā	dhīdhī	dhīnā	dhīdhī	dhīnā	tā.traka		tunnā

4			5			0			
11	12		13	14		15	16		
tā.traka		tunnā	kattā	trakadhina		ginadhāge		nadhātirakiṭa	

savārī baṛī (in dhrupad):

x				2				3				4		5	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
dhā	.	ki	ṭa	dhu	ma	ki	ṭa	ta	ki	ṭa	ta	kā	.	ki	ṭa

śikhir:

x				2				3		
1	2	3	4	5	6	7	8	9	10	11
dhā	traka	dhina	naka	thuṃ	gā	dhina	naka	dhuma	kiṭa	taka

4		5				
12	13	14	15	16	17	
dhet	dhā	tira	kiṭa	gadi	gina	

udaya:

x					2		3					
1	2	3	4	5	6	7	8	9	10	11	12	
dhā	ki	ṭa	dhī	nā	ta	ka	tā	ki	ṭa	dhī	nā	

udīrṇa:

x							2		3						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
dhā	.	ki	ṭa	ki	ṭa	dhin	ti	ṭa	tā	.	ki	ṭa	ta	ka	tin

It would carry us too far to compare different styles of *tablā* playing such as the Delhi *bāj*, Ajarāḍā *bāj*, Lucknow *bāj*, Banaras *bāj*, and Punjāb *bāj*, or to describe other methods of drumming, as for instance, the

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technique of the North Indian *pakhvāj* (i.e. the drum which accompanies the Hindustānī *dhrupad* style of singing) and the South Indian *mṛdaṅga*.[56]

Study of the ancient musical treatises might enable us to trace a historical link between the ancient and modern methods of drumming. As early as in the Nāṭyaśāstra[57] specific syllables indicate particular strokes of drumming. In the fourteenth century the Jainist author Sudhākalaśa[58] deals elaborately with tālas and drum syllables in the second chapter of his Saṃgītopaniṣatsāroddhara. However an exhaustive study of the history and technique of Indian drumming still remains to be written.

As in Karṇāṭak music so also has Hindustānī music preserved some very old tālas. The Hindustānī tāla *pratāpśikhir* (12 + 2 + 3), for instance, can be traced back to the ancient tāla *pratāpaśekhara* which Jagadekamalla[59] already mentioned in the twelfth century as a tāla with the structure S O Ò = 12 + 2 + 3. Other early authors[60] also refer to this tāla.

The Hindustānī tāla *jagajhampā* (8 + 2 + 2 + 3) existed too in the ancient period. Musicologists have evidently interchanged the names *jagajhampā* and *gajajhampā*. Śārṅgadeva[61] and Dāmodara[62] describe *gajajhampā* as a tāla with the structure: S O O Ò = 8 + 2 + 2 + 3 or 8 + 4 + 3. Jagadekamalla[63] refers to this rhythm in connection with *jagajhampā*.

The Hindustānī tāla *brahm* (4 + 2 + 4 + 2 + 2 + 4 + 2 + 2 + 2 + 4) is apparently based on the seventeenth century *brahma tāla*, which Damodara[64] describes as a tāla with the structure: I O I O O I O O O I = 4 + 2 + 4 + 2 + 2 + 4 + 2 + 2 + 2 + 4. A similar but slightly different rhythm (I O O I O O I O O O I) is referred to in the Rasakaumudī.[65] Since the chapters on tāla in the ancient treatises do not always give reliable readings, this small difference too may be incorrect.

The Hindustānī tāla *lakṣmī* of 36 mātrās (4 + 2 + 2 + 4 + 1 + 1 + 2 + 4 + 2 + 2 + 1 + 1 + 2 + 1 + 1 + 2 + 2 + 2) resembles the sixteenth century *lakṣmī* tāla, which the author of the Rasakaumudī[66] describes as

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[56] R. E. Brown, The Mṛdaṅga: A Study of Drumming in South India, Thesis, University of California, Los Angeles 1965.
[57] The Nāṭyaśāstra, transl. by Manomohan Ghosh, II, Calcutta 1961, p. 166 f., ch. 33, 42 ff.
[58] SudhSS. 2, 45-74.
[59] JagSC. p. 17 and 65.
[60] NandBh. 481; ŚārṅSR. 5, 293 and DāmSD. p. 143.
[61] ŚārṅSR. 5, 294.
[62] DāmSD. p. 144.
[63] JagSC. p. 53.
[64] DāmSD. p. 150.
[65] ŚrīRK. 4, 153.
[66] ŚrīRK. 4, 155 f.

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0 0 I ∪ ∪ 0 I 0 0 ∪ ∪ 0 ∪ 0 0 ∪ 0 I = 2 + 2 + 4 + 1 + 1 + 2 + 4 + 2 + 2 + 1 + 1 + 2 + 1 + 2 + 2 + 1 + 2 + 4 = 36 *anudrutas*. Although the minor sections (*aṅgas* or *vibhāgas*) of these tālas are placed somewhat differently (the initial series of four beats, for instance, has moved to the end of the cycle!), the general structure and the total number of beats in the cycle is the same in the old tāla and its modern equivalent.

As it is not possible to discuss here all the examples which demonstrate the continuity of rhythm in the history of North Indian music, the reader is recommended to examine the structure and development of the following ancient tālas that have still survived, though they are seldom used in Hindustānī music today.

name[67]	modern structure[68]	ancient structure[69]
antarakrīḍā	2 + 2 + 3	0 0 Ò
bhagna	2 + 2 + 2 + 2 + 5 + 5 + 5	0 0 0 0 I I Ì
candrakalā	2 + 2 + 2 + 3 + 3 + 3	S S S Ś Ś Ś
catustāla	4 + 2 + 2 + 2	S 0 0 0 or 0 0 0 I
citra	2	∪
gajalīla	4 + 4 + 4 + 4 + 2	I I I Ì
gārugi	2 + 2 + 2 + 3	0 0 0 Ò
ghattā	1 + 1 + 2 + 1 + 1 + 2	0 0 I S
haṃsalīla	2 + 3	I Ì
kandarpa	2 + 2 + 4 + 8 + 8	0 0 I S S
laghuśekhara	5	Ì
madana	2 + 2 + 8	0 0 S
mallatāla	4 + 4 + 4 + 4 + 2 + 3	I I I I 0 Ò
mallikāmoda	4 + 4 + 2 + 2 + 2 + 2	I I 0 0 0 0
nandana	4 + 2 + 2 + 4 + 12	I 0 0 Ś or I I 0 0 Ś
nāndī	4 + 2 + 2 + 4 + 4 + 8 + 8	I 0 0 I I S S
niḥsāruka	4 + 4 + 1	I Ì
pratitāla	4 + 2 + 2	I 0 0
rājamārtaṇḍa	8 + 4 + 2	S I 0
rājanārāyaṇa	2 + 2 + 4 + 8 + 4 + 8	0 0 I S I S
rāyavaṅkola	8 + 4 + 8 + 2 + 2	S I S 0 0

[67] The Tāla Prakāśa contains some alternative readings which are not always correct: *rājamaṇḍita* for *rājamārtaṇḍa*, *rājanāyaṇa* for *rājanārāyaṇa*, *rāyavaṅka* for *rāyavaṇkola*, *saṃghalīla* for *siṃhalīla*, *saṃgavikrama* for *siṃhavikrama*, *basanta* for *vasanta*, etc.

[68] Compare note 55.

[69] The structure of the ancient tālas is described in the chapters on tāla of the following works: Aum., JagSC., NandBh., ŚārṅSR., SudhSS. and DāmSD.

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ṣaṭtāla	2 + 2 + 2 + 2 + 2 + 2	O O O O O O
siṃhalīla	4 + 2 + 2 + 2 + 4	I O O O I
siṃhanāda	4 + 8 + 8 + 8 + 4 + 8	I S S S I S
siṃhavikrama	8 + 8 + 8 + 4 + 12 + 8 + 4 + 12	S S S I Ṡ I S Ṡ
turaṅgalīla	3 + 3 + 2 + 2	Ò Ò O O
utsava	4 + 2 + 2 + 2	I I Ṡ
vardhana	2 + 2 + 4 + 11	O O I Ṡ
varṇabhinna	2 + 2 + 4 + 8	O O I S
varṇamaṇṭhikā	4 + 4 + 2 + 2 + 4 + 2 + 2	I I O O I O O
varṇatāla	2 + 3 + 3	I I Ṡ Ṡ
vasanta	2 + 2 + 2 + 4 + 4 + 4	I I I S S S
viṣama	2 + 2 + 2 + 3 + 2 + 2 + 2 + 3	O O O Ò O O O Ò
yatilagna	2 + 4	O I

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CHAPTER FOUR

COMPOSITION

The classical music of India cultivates composition in a rich variety of forms. This is partly due to differences between regional styles (Hindustānī, Karṇāṭak, Bengali, etc.), but also to the fact that classical Indian music has invariably assimilated folk and foreign material as in the case of Hindustānī music where foreign influence (especially Arabian and Persian influence) is particularly marked.

North Indian (Hindustānī) compositions

First we shall discuss the *dhrupad*, which is one of India's oldest musical compositions. Its formal structure serves as basis for many other Indian forms of music including the Hindustānī *khyāl*, *thumrī* and *rāga*, and the Karnāṭak *kriti*, *varṇam* and *padam*, as well as for a number of minor works. A *dhrupad* has always been a serious song of religious, heroic or laudatory character. In ancient days its language was Sanskrit, later it was also sung in Brāj-bhāṣā or in Hindī. In conformity with its solemn character the musical style of a dhrupad is somewhat severe: no ornaments except broad slides (*glissandi*) are allowed and melodic improvisation on the theme is restricted to variations created by introducing it at different points in the rhythmic cycle. Rhythmically a *dhrupad* is also limited, as it uses only the less complicated tālas, such as *cautāl*, *dhamār*, *sūlaphāktā*, *tivrā*, *dhima*, *tritāl*, *jhaptāl* and *rūpak*. It is sung to the accompaniment of the *pakhvāj*[1] and the *tanpūra*.[2] Its text is a poem containing four lines, the rhythm of which should be clearly marked in the singing. The musical structure of a *dhrupad* is as follows:[3]

The *ālāpa*, an introduction devoid of text and rhythm (*tāla*), sung to meaningless syllables (*ah*, *nah*, *tom*, *nom*, etc.) or to solmization syllables (*sa*, *re*, *ga*, etc.), and accompanied by the *tanpūra* alone.

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[1] i.e. the North Indian double-face drum.

[2] i.e. a long-necked lute with four strings tuned to the tonic and one or more predominant note(s) of the rāga, which are only played on open strings in order to provide a constant drone.

[3] W. Kaufmann, The Rāgas of North India, Bloomington, London 1968, p. 25 f.

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The *(a)sthāyī*, the first line of the *dhrupad* poem sung to a melody based on the first tetrachord of the middle octave (*madhya saptaka*) and the notes of the lower octave (*mandra saptaka*).

The *antara*, the second line of the poem sung to a melody using the second tetrachord of the middle octave and the notes of the higher octave (*tāra saptaka*).

The *saṃcārī*, the development, in which the last two lines of the poem are combined with melodic material drawn from the *asthāyī* and the *antara*. The ensuing variations built on that melodic material use the notes of all three octaves.

The *ābhoga*, the concluding section of the *dhrupad*, repeats the melody from the *asthāyī*. Special rhythmical variations are now introduced in which the time value of the notes is diminished; that is to say they have only half (*dugun*), one third (*tigun*) or one fourth (*caugun*) of their original value.

In the *asthāyī*, *antara*, *saṃcārī* and *ābhoga* the singer is fully supported by the *pakhvāj* and the *tanpūra*.

Historically speaking the *dhrupad* is of interest since it is generally regarded as being very old, though it has naturally undergone considerable change in course of time. The term *dhrupad* possibly derives from *dhruvapada*, which is already used in the Nāṭyaśāstra (about the first century B.C.)[4] to indicate songs which are fixed (*nibaddha*) in regard to the number of syllables they contain, the metre (*chandas*) of the verse, the rhythm of the music (*tāla*), and the pace (*yati*).[5] In ancient times the term *dhruva* appears to have been a synonym for "traditional", because the Nāṭyaśāstra[6] uses the term in connection with both religious (or ritualistic) *ṛc*, *pāṇikā* and *gāthā* verses as well as stage songs (*madraka*, *ullopyaka*, *aparāntaka*, *prakarī*, *oveṇaka*, *rovindaka* and *uttara*). However, in most of the early references the term only applies to the well known ancient stage songs that were performed during the preliminaries of a play[7] glorifying the gods. According to the Nāṭyaśāstra,[8] *dhruva* songs are so named because they have a fixed (*dhruva*) interrelation between words (*vākya*), melodic curve (*varṇa*), musical ornamentation (*alaṃkāra*), pace (*yati*), way of beginning (*paṇi*) and speed

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[4] BhN. 32, 34 (Bombay ed.).

[5] Yati is determined by an increasing, decreasing or stable number of notes filling the basic time-units throughout a composition.

[6] BhN. 32, 2 (Bombay ed.).

[7] Cf. BhN. 32, 433 (Bombay ed.; Ghosh, Transl. II, p. 155, ch. 32, 483).

[8] BhN. 32, 8 (Bombay ed.).

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(*laya*). Like the modern *dhrupad* songs, the ancient *dhruva* songs[9] show preference for simple tālas (i.e. the *tryaśra* and *caturaśra* tālas), whereas the more complicated *miśra* ("mixed") and *saṃkīrṇa* ("composite") tālas consisting of 5, 7, 9, 10 or 11 *kalās* (the ancient basic time units) tend to be avoided.

Although there is some doubt about whether the ancient *dhruva* songs are in any way musically related to the thirteenth century *sālaga-sūḍa-dhruva-prabandha*, commenting upon *prakaraṇānvitam*[10] the fifteenth century author Kallinātha, states that the ancient *dhruva* songs, called *madraka*, etc. were incorporated as compositions (*prakaraṇa*) in Śārṅgadeva's *sālaga-sūḍa-dhruva-prabandha* compositions. Neither Śārṅgadeva nor Bharata (the author of the Nāṭyaśāstra) says anything about the rāgas, to be used in his *dhruva* songs. Bharata only states[11] that the seven types of *dhruva* songs (*madraka*, *ullopyaka*, etc.) are recognizable by their tālas. The fourteenth century royal author Kumbha(karṇa), however, illustrates his discussion on the ancient stage songs (i.e. Bharata's *dhruva* songs, *madraka*, etc.) with musical examples[12] in which each song consists of several main sections (*vastu*) and a number of rhythmical subsections (*mātrā*, used here to denote a rhythmical phrase and not the ancient time unit which was equal to half a *kalā*), each of which is set to a different rāga. It is doubtful whether Kumbhā's examples of the ancient *dhruva* songs would be at all applicable to contemporary musical practice. His chapter on the *sālaga-sūḍa-dhruva-prabandha* compositions,[13] which contains no musical examples, gives us no better insight into the compositions of his own time.

About the structure of this type of *prabandha* composition Śārṅgadeva[14] informs us as follows: It has four parts (*dhātus*) called the *udgrāha*, the *melāpaka*, the *dhruva*, and the *ābhoga*, from which the *melāpaka* and the *ābhoga* may be omitted in smaller works which contain only three or two parts. In all *sālaga-sūḍa-prabandha* compositions an extra section, the so-called *antara*, is inserted between the *dhruva* and the *ābhoga*.[15] Although the *dhruva* may have been the fixed part or refrain which is never omitted, when defining the *sālaga-sūḍa-dhruva prabandha*,[16] Śarṅgadeva himself

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[9] BhN. 31, 25 (Baroda ed.).
[10] Cf. ŚārṅSR. 4, 313.
[11] BhN. 31, 367 f. (Baroda ed.; Ghosh, Transl. II, p. 103, ch. 31, 483 f.).
[12] KuSR. 2, 4, 1, 82 f. (the song section or *gītakaparikṣaṇam* of the *prabandhollāsa*, the chapter on musical composition.
[13] KuSR. 2, 4, 2: the *sūḍaprabandhaparikṣaṇam*.
[14] ŚārṅSR. 4, 7-9.
[15] ŚārṅSR. 4, 9 f.
[16] ŚārṅSR. 4, 315 f.

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does not mention the *dhruva* section at all. He only refers[17] to the following structure: first comes the *udgrāha*, an introduction containing two similar subsections (*khaṇḍa*), then the *antara*, which has only one subsection, the melody of which is based on the notes of the higher octave (*tāra*); thereafter the *udgrāha* and *antara* should be repeated; the final section, the *ābhoga*, uses material from the *udgrāha* and the *antara*, and mentions the name of the composer.[18] The basic elements of this structure are still found in the *dhrupad* song of modern times. The first part of the modern *dhrupad* is, however, called the *asthāyī*; its second part, the *antara*, is still sung in the higher octave. The second which develops material from the first two parts is now called the *sañcārī*, while only the last section, which mentions the composer's name, is still called the *ābhoga*. The modern *dhrupad* is preceded by an improvised introduction (*ālāp*), which is not referred to by Śārṅgadeva.

We may recognize the structure of the old *dhruva-prabandha* in the *aṣṭapadīs* of Jayadeva's Gītagovinda (twelfth century). But these compositions only contained two parts (i.e. the *dhruva* and the *ābhoga*), and only the text and names of the rāgas used have been handed down to us.

The oldest specimens of *dhrupads* that have thus far come down to us are the mystic songs (*caryā*) of Kāṇha, Saraha and other Buddhist monks,[19] who probably lived between the tenth and twelfth centuries. These songs, which are written in ancient Bengali and were translated into Tibetan even before the fifteenth century, mostly consist of four to six couplets and a refrain (*dhruvapada*) repeated after each couplet. At the top of the compositions the name of the rāga and the composer's name are mentioned. Deviating from the practice followed in the *dhruva-prabandhas* discussed in the Saṃgītaratnākara, the composer's name also occurs in the refrain (*dhruvapada*) of these mystic songs whereas, according to Śārṅgadeva, it is referred to only in the *ābhoga* section.

An innovation in the ancient *dhruvapada* or *dhrupad* composition possibly took place during the reign of Allāuddin Khaljī, sultan of Delhi (1296-1316), whose famous court poet, Amir Khusrau, was well versed in both Hindustānī and Persian music. He wrote *dhrupad* compositions based on Indian folk music.[20] The *dhrupad* cultivated at this court may also have been influenced

[17] Cf. also Siṃhabhūpāla commenting upon these verses, ŚārṅSR. vol. II, p. 342.

[18] Cf. ŚārṅSR. 4, 317 and vol. II, p. 342, line 6 of the comm.

[19] Cf. Prabodh Chandra Bagchi and Śānti Bhikṣu Śāstrī, Caryāgīti-koṣa of Buddhist Siddhas, Santiniketan 1956.

[20] Swāmi Prajñānānanda, A Historical Study of Indian Music, Calcutta 1965, ch. IX, p. 176; Abūl Fazal-i-Allāmi, The Āin-i-Akbari, transl. by Colonel H.S. Jarrett and revised by Sir Jadunāth Sarkār, Calcutta 1948, Bibliotheca Indica 270, vol. 3, p. 266 f.

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by a wandering monk (*sādhu*) called Baiju Bāvrā, who was invited to attend Allāuddin's court.[21]

Two centuries later Gopāl Nāyak,[22] a composer from Devgiri (South India), who used to sing Sanskrit *prabandha* compositions, started composing Hindī *prabandha* songs after he migrated to the North. At about the same time the *dhrupad* was also in high favour at the court of Rājā Māna Siṃha Tumāra of Gwalior (1486-1525). The king himself, the queen Mṛganāyanī Devi, and the court musicians Nāyak Bakṣu, Macchu and Banu classicalized the regional variety of the old *dhrupad*.[23]

Śubhaṃkara, author of the Saṃgītadāmodara, who probably lived in the fifteenth century, describes the structure of *dhruva(ka)* compositions as follows:[24] First the *udgrāha* is sung; then the *dhruva*; after that come the *antara* and the *dhruva*; and finally, the *ābhoga* and the *dhruva*. Furthermore this author states that the *dhruva* must always be sung at the end of the preceding couplet and that the section containing the composer's name is called *ābhoga*.

The fifty-nine songs of the famous collection Kitāb-i-Nauras composed by Ibrahim Adil Shah II, sultan of Bījapur (1580-1626),[25] may also have been compositions in the *dhrupad* style. These laudatory songs dedicated to Sarasvatī, Gaṇeśa and other Hindu deities as well as to Sayyid Hussain-i-Gesu Daraz (Mohammad), had to be sung to the following seventeen *rāgas*, which are however called *maqams* (Arabian): *bhūpāli* (2, i.e. in two instances), *rāmkri* (2), *bhairava* (6), *hajiz* later named *hijeja* (1), *māru* (2), *āsāorī* (2), *deśī* (1), *pūrba* (1), *barārī* (1), *toḍī* (4), *malār* (5), *gaurī* (2), *kalyān* (4), *dhanāśrī* (2), *kanāra* (or *karṇāṭa* 19), *kedāra* (4), and *nauroz* (later called *navarvecika*, 1). At the beginning of each song the particular rāga to be used in

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[21] Nikhil Ghosh, Fundamentals of Rāga and Tāla, Bombay 1968, p. 17 f.

[22] Most probably this Gopāl Nāyak and the musician who is said to have held a musical contest with Amir Khusrau, are not one and the same person. Cf. M. W. Mirza, Life and Works of Amir Khusrau, Lahore 1962, p. 238, note 3. The story of the musical contest, told by almost every musical author, is already referred to in the Rag Darpan by Faqirullah, Muslim University Aligarh Ms. folio 14 b; cf. A. Halim, History of the Growth and Development of North-Indian Music during the Sayyid-Lodi Period, in: Journal of the Asiatic Society of Pakistan, vol. 1, no. 1, Dacca 1956, p. 51. Dr. Halim mentions a Gopāl Nāyak, who may have lived during the early sixteenth century, in connection with Bahādur Shāh of Gujarāt (1526-1537), who was also the patron of the famous musician Nāyak Baiju (A. Halim, History, p. 58).

[23] O. Gosvami, The Story of Indian Music, Bombay 1957, p. 123 f.; Nikhil Ghosh, Fundamentals, p. 19; Ain-i-Akbari, vol. 3, p. 265 f.; A. Halim, History and Growth, p. 60 f.; O. C. Gangoly, Rāgas & Rāginīs, vol. 1. Delhi 1948 (= 1935), p. 50 f.

[24] ŚubhSD. p. 19, lines 11 f.

[25] Cf. Nazir Ahmed, Kitab-i-Nauras, in Islamic Culture 28 (1954), 1, p. 348 f.; an edition of K.-i-N. by the same, Bharatiya Kala Kendra, New Delhi 1956.

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the song is specified, but the various sections of the song are not clearly marked. The name of the first part, which may have been the same as the ancient *udgrāha* or the modern *asthāyī*, is nowhere indicated. The second part, which occurs in some songs more than once, is called *bain* or *antra* while, in conformity with tradition, the last section is referred to as the *ābhoga*.

During the second half of the sixteenth century four styles of *dhrupad* singing were in vogue at the court of Akbar the Great (1556-1605). These were:[26]

1. The *gauḍī* or *gauḍahāra vāṇī* introduced by Tānsen, Akbar's famous musician, who was a gaudian brahmin before his conversion to Islam. This style is very traditional and has a slow, elephantine gait. It evokes a quiet state of mind (*śānta rasa*). Bahadur Khān, descended from Tānsen's son Vilās Khān, founded a branch of this school or style in Viṣṇupur, the so-called *Viṣṇupur gharāṇa*.

2. The *khāṇḍāra vāṇī* introduced by Naubat Khān from Khandār in Rājputāna. This style is full of variety and melodic richness. Its speed is not exaggeratedly slow, and it expresses heroic feeling (*vīra rasa*) and exhilaration (*tīvra rasa*).

3. The *nauhāra vāṇī* introduced by Śrīchand from Nauhār (Delhi district). This style charms through its simplicity and has an easy, agile gait. The melody often jumps from the first to the third or fourth note. The *nauhāra vāṇī* expresses feelings of wonder (*adbhuta rasa*).

4. The *dāgara vāṇī* introduced by Bṛj Chānd from Dagar (Rājputāna). This sweet, pleasing style is a combination of the *gauḍī* and *khāṇḍāra vāṇīs*. It expresses feelings of delight and compassion (*madhura* and *karuṇa rasas*) and was used in Vṛndāvana by disciples of Hāridās and by Sarasvatī Devi (the daughter of Tānsen).

After Tānsen's death members of his family founded three schools (*senī gharāṇas*):[27] Tānsen's son Bilās Khān, a representative of the *gauḍī-vāṇī*, founded one at Delhi. Another son of Tānsen's, Suratasen, a representative of the *dāgara-vāṇī*, founded one at Jaipur. The husband of Tānsen's daughter Sarasvatī Devi, Miśri Siṅgh, represented two *dhrupad* styles, viz. the *dāgara* and *khāṇḍāra vāṇī*.

Another famous *dhrupad* school, the *tilmaṇḍī gharāṇa*[28] was founded by Chānd Khān and Suraj Khān in the Punjab. *Kathakas* (story-tellers) from

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[26] Gosvami, Story, p. 125 f.
[27] Prajñānānanda, Historical Study, p. 216 f.
[28] Historical Study, p. 217.

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Vārāṇasī (Banaras) and Muslim Ustads (teachers) from Kalpī, who were disciples of Hāidār Khān Senī from Lucknow, formed the *betiyā gharāṇa*.[29]

In modern times pure *dhrupad* singing has become very rare. It is cultivated by the four sons of Nasiruddin Khān, that is to say by the (older) Dagar brothers[30] Nasir Moinuddin Dagar and Nasir Aminuddin Dagar, and by the (younger) Dagar brothers[31] Nasir Faiyazuddin Dagar and Nasir Zahiruddin Dagar.

A song with the same musical structure as the classical dhrupad is the *hori*, or *hori-dhamar*.[32] It was originally a folksong from Vṛṅdāvana and Mathurā and became the traditional song of the Holi festival[33] (February/March), when people sing *horis* in the streets while sprinkling each other with water coloured red. The general theme of the *hori-dhamār* is the love between Rādhā and Kṛṣṇa. Although this song has the same musical structure as the *dhrupad*, it contains more ornamentation than its serious classical example and in addition to the usual *bol-tāns*, other types of variation, i.e. rhythmical variations, or rather diminutions, figure in it: *dugun*, *tigun* and *chaugun* respectively referring to a twofold, threefold and fourfold division of the basic time unit (*mātrā*). These time divisions do not however change the basic rhythmical cycle, which in this composition is always *dhamār* tāla:

	x			0		2		0			3		0	
or:	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	ka	dhi	ṭa	dhi	ṭa	dhā	.	ga	ti	ṭa	ti	ṭa	tā	.
	dhā	ge	ṭa	dhi	ṭa	dhā	.	tā	ki	ṭa	ki	ṭa	tā	.

The second large classical Hindustānī composition, the styles and techniques of which vividly contrast with the sobre, severe style of the *dhrupad*, is the *khyāl*.

Musicologists do not agree about the historical background of the *khyāl*. Perhaps it would be safe to assume that it was neither a purely Indian, nor a completely foreign (Persian-Arabian) product. Its literary basis may have been the fourteenth century *qavali*, a regional, devotional Muslim song which attained classical standing when cultivated by the great poet Amir

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[29] Historical Study, p. 218.
[30] Grammophone Record E A L P 1291.
[31] Grammophone Record E A S D 1334.
[32] Cf. Vani Bai Ram, Glimpses of Indian Music, Allahabad 1962, p. 62 f.; V. K. Agarwala, Traditions and Trends in Indian Music, Meerut 1966, p. 50; BhātKPM. IV, p. 50 f.
[33] Cf. P. Thomas, Festivals and Holidays of India, Bombay 1971, p. 7.

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Khusrau. He is accredited with the invention of many Hindustānī musical compositions and instruments.[34]

In the fourteenth century two styles of *qavali* singing developed: the *qāvāl-gharāṇa* founded by Amir Khusrau at the court of his patron Allāuddin Khaljī (1296-1316 sultan of Delhi); and the *kalāvanta-gharāṇa* established by Baiju Bāvrā and Brj Chānd (disciples of Haridāsa and Suradāsa at Mathurā).[35] Whereas the *qavals* favoured the religious, devotional type of *qavali*, the *kalavants* gave it a more secular turn.

The text of the *khyāl* may also have been influenced by the *pachda*, an old Hindustānī women's love song.[36]

As a musical composition the *khyāl* held a unique position right from the beginning. Its name *khyāl* — Arabic for "imagination" — is probably due to its rich, ornate style of singing and preference for variation. Nevertheless the present author suggests that neither Arabian nor Indian culture can wholly claim the privilege of inventing this peculiar style of singing and elaborate variation technique. Yet some musicologists regard *khyāl* singing as based on purely Indian principles.

According to Jaideva Singh[37] this ornate style of singing can be traced to the ancient Indian *sādhāraṇa gīti* (lit. "universal style of singing"). He links the formal structure of the *khyāl* with that of the ancient *rūpaka* and *rūpakālapti*, which do indeed seem to bear some resemblance to the later *khyāl*. As in the modern *khyāl*, in the ancient *rūpaka* compositions described in the Saṃgītaratnākara,[38] *navatā*, i.e. "freshness", or rather "variety", was the dominant feature. Although the *rūpaka* and *khyāl* were different types of composition, the *rūpakālapti* which forms part of the long *ālāp* of the modern *khyāl* does bear some likeness to the ancient *rūpakālapti* mentioned in the Saṃgītaratnākara.[39] The latter was more extensive than its modern equivalent since it contained a *rāga-ālāpa* (exposition of the melodic material of the rāga), a *pratigrahaṇikā* (exposition of the thematic material of the *rūpaka* composition comparable to the modern *rūpakālapti* occurring in the *khyāl*), and a *bhañjanī* (a set of ornamental and figurative variations, which have their equivalents in the modern *tān(a)s* of the *khyāl*). So the ancient *rupakālapti* contained the whole of the long *ālāp* as well as the *tān* section of the modern *khyāl*.

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[34] See however M. W. Mirza, Life and Works of Amir Khurau, p. 238-240.
[35] Prajñānānanda, Historical Study, p. 216.
[36] Gosvami, Story, p. 128 f.
[37] Jaideva Singh, The Evolution of Khayal, in: Aspects of Indian Music, Delhi ²1970, p. 88.
[38] ŚārṅSR. 4, 361-366.
[39] ŚārṅSR. 3, 197-202.

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In the fifteenth century the *khyāl* was especially cultivated at the court of Jaunpur. Husain Shāh Sharqī (1457-1483 sultan of Jaunpur, 1484-1494 sultan of Bihar), who bore the title of *gandharva*,[40] is alleged to have been a musical genius. He greatly contributed to the development of the *khyāl*, but also invented new rāgas, such as *malhār-śyāma*, *gaur-śyāma*, *bhopāl-śyāma* (and eight other *śyāmas*), *husainī-* or *jaunpurī-āsāvari* (nowadays named *jaunpurī*) and *jaunpuri-basant*.[41]

Towards the end of the fifteenth century, the solemn *dhrupad* composition in vogue at the court of Rājā Māna Siṃha Tumāra of Gwālior (1486-1517) was influenced by the more ornate style of *khyāl* singing introduced by Husain Shāh Sharqī.[42].

Although the *khyāl* was not officially as much patronized at Muslim courts as the *dhrupad* was, musicians in the time of Akbar (1556-1605) — Surāj Khān, Chānd Khān, Bāz Bāhādur (the former king of Mālvā who joined the musicians at Akbar's court) and his consort Rūpmātī — were highly interested in this type of composition. During this period the *khyāl* adopted the serious style of the *dhrupad* and was generally in slow speed (*vilambit khyāl*).[43] It became still more popular during the reign of Shahjahan (1628-1658) even though the *dhrupad* still continued to hold its predominant position. It was only in the mid-eighteenth century that the *khyāl* finally ousted the *dhrupad*.[44]

During the second half of the eighteenth century the following regional styles of *khyāl* singing were practised:

1. The *Gwālior gharāṇa*, which represents the purest style of *khyāl*. This school was famous for the care it devoted to voice production, for the clarity of its rendering the *asthāyī* and *antara* sections, for its perfect intonation of the *tāns*, and for its preference for *bol-tāns* and grace notes such as the *gamak* and the *khatkā*. It is said that Bāde Mohammad Khān, the famous musician at the court of Daulat Rao Sindhia of Gwālior (1794-1827), introduced the use of *tāns* in *khyāl* singing.[45] His pupils Haddu Khān, Hassu Khān and Nathe Khān, who were related to him (see table below), are said to have evolved the faster type of *khyāl*.[46] The following tables show the family or master-student relationship between the musicians of this school and of some of the other *gharāṇas*.[47]

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[40] A. Halim, History and Growth, p. 59.

[41] See note 40.

[42] Hist. and Growth, p. 60.

[43] Prajñānānanda, Historical Study, p. 213; Kaumudi, Mingling of Islamic and Indigenous Traditions in Indian Music, in: Indian Historical Quarterly 16 (1950), no. 1, p. 134.

[44] Hist. and Growth, p. 61.

[45] [46] Gosvami, Story, p. 130.

[47] Cf. Agarwala, Traditions and Trends, p. 25-35; Prajñānānanda, Historical Study, p. 217 f. referring to B. N. Roychoudhury, Hindustānī Music and Miān Tānsen, Calcutta no

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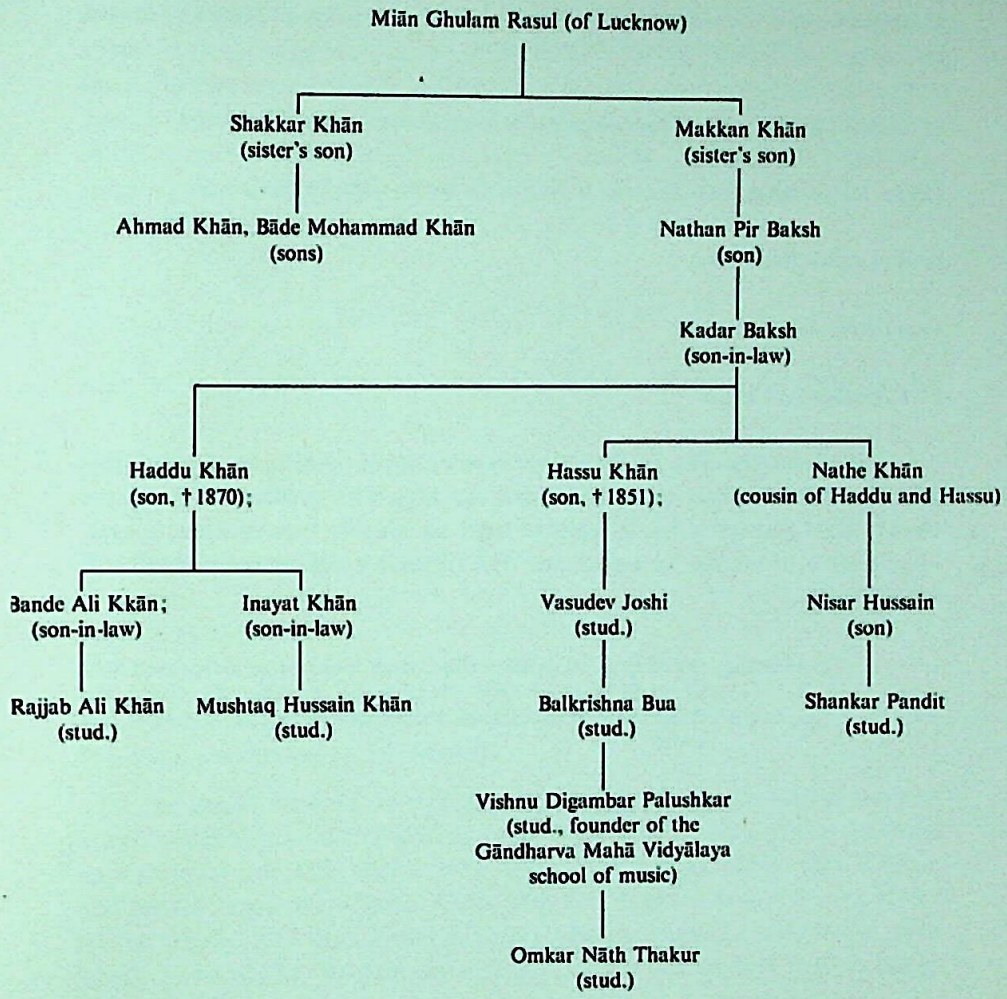

2. The *Agra gharāṇa*. This style of *khyāl* singing, which closely resembles *dhrupad* singing shows preference for neat pronunciation of the words of the song, and for a dignified presentation with beautiful rhythmic patters and *bol-tāns*. The chief representatives of this school were:

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year; Chand Khan, Khyāl Gayakī ka Delhi Gharāṇa (Urdu), Delhi 1966; Ramanlal Mehta, Agra Gharāṇa (Hindi), Baroda 1969; V. H. Deshpande, Carl Seashore, Bāṇīs and Gharāṇas, Nāda Rūpa I, part II, Benares Hindu Univ. 1963, p. 1-11; Idem, Indian Musical Traditions, Bombay 1973.

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Haji Sujan Khān (a comtemporary of Tānsen, the famous musician at Akbar's court, and a reputed *dhrupad* and *sadra* singer.

Shyāmrang (grandson; *dhrupad* and *dhamār* singer, representative of the *nauhār vāṇī*)

Ghagge Khuda Baksh (son; but stud. of Nathan Pir Baksh of the Gwalior *gharāṇa*)

Ghulam Abbas Khān (son)

Faiyaz Khān (daughter's son)

S. N. Ratanjankar (stud.)

3. The *Delhi gharāṇa*. In the longer type of *khyāl* (Hindī: *baṛa-khyāl*) this school uses more grace notes and treats the rāga with greater freedom than the Gwālior *gharāṇa* does. It tends to treat the shorter type of *khyāl* (*choṭa-khyāl*) as a romantic composition. The foremost representatives of this school were:

Sadarang (pseudonym of Niyāmat Khān, court musician of Mohammad Shah III of Delhi (1719-1748). He was also a *bīnkar* (*bīn* player) and *dhrupadīya* (*dhrupad* singer). He devised a new style of *khyāl* in slow speed).

Zain-ul-abdin Khān (stud.)

Miān Āchpāl (stud.)

Tānras Khān (stud.)

Ali Baksh and Fateh Ali; (stud.; duo: Alaiya Fattu)

Umrao (son);

Ghulam Ghaus Khān (son; himself not a musician)

Abdul Rahim Khān; Abdul Kārim Khān (sons)

4. The *Patiali gharāṇa*. Ali Baksh and Fateh Ali, who belonged to the Delhi *gharāṇa* and were students of Tānras Khan, a master of that school, also received lessons from a lady-musician Gokhi Bai. After returning to their own town with a new technique of *khyāl* singing, they founded the

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Patiali *gharāṇa*. They introduced *tappā-tāns* in the *khyāl* and composed many *khyāls* in Brāj-bhāṣa and Punjabi dialects. The Patiali *gharāṇa* is well known for its ultrafast *tāns*, which Ali Baksh and Fateh Ali took over from their master Tānras Khān. This school trends towards the lighter forms of classical music, such as the *thumrī*, which can be explained as a romantic revolt against the rigidities of classicism.

The Patiali *gharāṇa* is represented by the following musicians:

Tānras Khān (of the Delhi *gharāṇa*)
|
Fateh Ali (stud.; partly of Delhi *gharāṇa*); Ali Baksh (stud.; partly of Delhi *gharāṇa*)
|
Ali Baksh (stud.)
|
Bāde Ghulam Ali (son; *khyāl* and *thumrī* singer)
|
Manawar Ali Khān (son)

The famous singers from Pakistan, Salamat Ali and Nazakat Ali (the Ali brothers), also belong to this *gharāṇa*.

5. The *Itrauli gharāṇa*. In Itrauli (Aligarh district) the *khyāl* was sung in a style which was a mixture of the Delhi, Agra and Gwālior styles. Famous representatives of this school were the lady-musician Kesar Bai Kerkar and her teacher Ustad Alladia Khān, who was a son-in-law of Hassu Khān (of the Gwalior *gharāṇa*). Ustad Alladia Khān established a style of his own, which balanced the ultrafast style of the Patiali school and the ultraslow style of the Agra school.

6. The *Kairāna gharāṇa*. As some musicians of this school were vocalists as well as instrumentalists (especially *bīn*-players), its vocal style has been influenced by instrumental music. Its rendering of the *khyāl-ālāp* accentuates the *vādin* (central note) and the *saṃvādin* (an important note in the rāga always consonant with the central note), as is done by *bīnkars* in the *rāg-ālāp*. A quiet and peaceful rāga development, careful attention to the rules of music aesthetics and a general sweetness of style are characteristic of this school, which is represented by the following musicians:

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Ghulam Taqqi (eighteenth century *bīnkar* and *dhrupadīya* from Kairāna in the Mīrut district)
|
Sadiq Ali Khān (son)
|
Bande Ali Khān (son; master of *bīn*, *sitār*, *dhrupad* and *khyāl*; son-in-law of Haddu Khān of the Gwalior *gharāṇa*)
|
Maharāja of Indore (stud.)

The famous artists Abdul Karim Khān, Sawai Gandharva and Amir Khān also belong to this *gharāṇa*, although the latter regards himself as a representative of the Indore school.

The *khyāl* of today can be described as follows: Unlike the *dhrupad* it is a rich, exuberant vocal composition, using different types of variation (*tāns*), liberal ornamentation (all kinds of shakes, slides or *glissandi*, and other grace notes) and the more complicated tālas. Its introductory *ālāp* is rather short; but the real, long *ālāp* figuring in the composition itself comes in the middle of the *khyāl*. In the earlier *khyāl* greater attention was paid to the text; but in the later *khyāl* the words became a mere framework for the music.[48] There are now two types of *khyāl*: a longer composition (*baṛa khyāl*) in slow speed (*vilambita*), and a shorter composition (*choṭa khyāl*) in fast speed (*druta*). The first type uses tālas such as *dhima*, *ektāl* and *jhumrā*; the second type, the tālas *tīntāl*, *jhaptāl*, etc.[49] In present day recitals these two types of *khyāl* are usually combined, i.e. sung one after another in the same rāga. In this way, after having performed a slow *khyāl* with its appropriate variations, the musician may display his skill in fast *tāns* on the theme of a fast *khyāl* without being compelled to violate the solemn theme of the slow composition in inappropriate fast variations.

The *khyāl* of today has the following structure:[50]

The *ālāpa* (shorter than in the *dhrupad*) by soloist (voice or instrument) and accompanying drone (*tanpūra*).

The *asthāyī*.

a. Introductory rhythmical phrase (*peṣkar*) by the drummer (*tablā*).
b. Basic rhythmical phrase (*ṭheka*) in a particular tāla performed by the drummer, and basic melodic phrase in a particular rāga performed by the soloist on the lower notes of the middle octave.

[48] Gosvami, Story, p. 129.
[49] Gosvami, Story, p. 131.
[50] Walter Kaufmann, The Ragas of North India, Bloomington, London 1968, p. 28 f.

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The *antara*. Second melodic phrase on the higher notes of the middle octave and reaching into the higher octave.

The *asthāyī*. Shortened form of the *asthāyī* containing only one tāla cycle (*āvarta*) from *sam* to *sam*.

The *ālāpa*. Real, long *ālāpa* by all musicians namely: the soloist (mostly a singer), the drummer (*tablā*), the drone (*tanpūra*), and the Indian violin (*sārangī*), which accompanies the soloist in heterophonic style, i.e. by following the main line of the soloist's melody, and fills his pauses with imitations.

a. *rāga-ālāpa*: exposition of the tone material of the rāga, including important notes which are used frequently (*bahu*) and rare (*alpa*) notes, as well as characteristic motifs (*pakaḍ*), etc.

b. *rūpaka-ālāpa*: short exposition of the formal structure of the whole song containing *asthāyī*, *antara*, *sañcārī* and *ābhoga*. The soloist competes with the drummer in creating new rhythms. In this part the vocalist uses meaningless syllables (*ah*, *nah*) or tone syllables (*sa*, *re*, *ga*, etc.) as text.

The *asthāyī* and *antara* are here sometimes repeated.

The *bol-tāns*. Figurative and ornamental variations. The vocalist treats the words (Hind. *bol*) more freely, using them as a mere framework for the music. There are two types of *bol-tāns*: the longer and the shorter type.

The *asthāyī* and the *antara* are here repeated.

The *tāns* proper. More complicated variations sung to the meaningless syllables *ah* and *na*. These *tāns* are also of the longer and shorter type.

The *conclusion*. The soloist may either introduce a new melody composed by himself containing an *asthāyī* and an *antara*, or he may repeat the first phrase of the original *asthāyī* on the *sam*.

Having discussed the larger, classical forms, *dhrupad* and *khyāl*, we shall now deal with some of the smaller, semiclassical compositions, which are sometimes disregarded by musicologists but are highly appreciated by lovers of music.

First to be mentioned is the *tappā*,[51] a Muslim lovesong. This was originally sung by camel-drivers but developed later into a more sophisticated composition. The emperor Mohammad Shah (1719-1748) is said to have been very fond of *tappās*. Shori Miyan (c. 1810) of Lucknow, who was attached to the court of Nawab Asaf-ud-Daulah of Oudh, contributed a great deal to the development of this song, which he generally based on

[51] Vani Bai Ram, Glimpses of Indian Music, p. 67; Gosvami, Story, p. 136; A. Daniélou, Inde du Nord. Les Traditions Musicales, I, Buchet/Chastel, Paris 1966, p. 79.

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Pañjābī folksongs. The famous Pañjābī lovestory of Hīr and Rañja became its central theme. In structure the *tappā* consists of two main melodic episodes (the *asthāyī* and the *antara*) and a number of figurative and ornamental variations (*tāns*) performed in rapid speed. All grace-notes are used excepting the large (i.e. broad and heavy) shakes (*gamak*) characteristic of the *khyāl*.

Another important lovesong, probably of a later date than the *tappā*, is the *ṭhumrī*.[52] Its main theme is erotic sentiment (*śṛṅgāra rasa*) expressed in singing (*gīta*) to an instrumental accompaniment (*vādya*) and combined with miming (*abhinaya*) and dancing (*nṛtya*). A *ṭhumrī* is generally performed by a female singer and a female Kathak dancer. In keeping with an older tradition, instead of dancing the latter sometimes performs the singing in a seated position and illustrates it with mime. In course of time three styles of *ṭhumrī* singing developed. At the court of Oudh the so-called Lucknow style — considered to be the purest style, and richly ornamented with grace notes — was cultivated by the following musicians: Lalan Piya, Sanad Piya, Qadir Piya, Majuddin and Sadiq Khān. The Nawab of Oudh himself, Wajid Ali Shah, also composed *ṭhumrīs*. In Banaras the *ṭhumrī* was influenced by folksongs, such as the *kajrī* and the *caitī*.[53] A third type of *ṭhumrī* is the Pañjābī ṭhumrī, which adopts the style of Pañjābī folk songs (*pahāṛī* and *mahīya*) but borrows its *tāns* from the *tappā*. The famous singer Bade Ghulam Ali Khān [54] is a representative of this style which has become very popular in modern times. The outstanding *khyāl* singers, the late Abdul Kārim Khān [55] and Faiyaz Khān,[56] representatives of the Kairāṇa and Agra *gharāṇas* respectively, were also well known for their *ṭhumrī* singing. Generally the *ṭhumrī*, which may combine two or three different rāgas, is based on the rāgas: *khamāj*, *kafī*, *pilu*, *mand*, *tilak-kāmod*, *jhinjhoti* and *bhairavī*. Hence it has a leaning towards the lighter rāgas. As a rule the *ṭhumrī* melody contains many slides and all kinds of small grace-notes, but avoids the larger shakes (*gamak*). Often a higher pitch, *madhyama śruti* (i.e. a fourth higher than the musician's usual *sa*), is taken as starting point, which theoretically means that the *madhyama* (i.e. the fourth note of the middle octave, *madhya saptak*) becomes the tonic *ṣaḍja* (*sa*).

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[52] Vani Bai Ram, Glimpses, p. 67; Gosvami, Story, p. 133 f.; Daniélou, Inde du Nord, p. 79 f.; Prem Lata Sharma, The Origin of Thumari, in: Aspects of Indian Music, New Delhi ²1970, p. 73-85.

[53] Trilochan Pande, Bhojpuri Folklore and Folk Music, in: Hemango Biswas (ed.), Folkmusic and Folklore. An Anthology, I, Calcutta 1967, p. 19 f.

[54] Gramm. rec. M O A E 5004 and 5005.

[55] Gramm. rec. 33 E S X 3251 and 3253.

[56] Gramm. rec. E A L P 1292.

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The following rhythm, which is a variety of *tīntāl*,

x	2	0
1 2 3 4	5 6 7 8	9 10 11 12
dhā dhin ...kṛa dhin	dhā dhin ...kṛa dhin	dhā tin ...kṛa tin

3
13 14 15 16
tā dhin ...kṛa dhin

is frequently used in *ṭhumrī* and *tappā* compositions. In the case of the *ṭhumrī* we may also note a preference for the following tālas:

dīpcandī:

x	2	0	3
1 2 3	4 5 6 7	8 9 10	11 12 13 14
dhā dhin .	dhā dhā dhin .	tā tin .	dhā dhā dhin .

tilvāḍā:

x	2	0
1 2 3 4	5 6 7 8	9 10 11 12
dhā tirakiṭa dhin dhin	dhā dhā tin tin (dhin dhin)	tā tirakiṭa dhin dhin (tin tin)

3
13 14 15 16
dhā dhā dhin dhin

The *ghazal*[57] originally a Persian love song, is another type of *ṭhumrī* sung in Urdu. It uses only one couplet of a poem as text. Its characteristic tālas are the above mentioned *dīpcandī*, and *paśto* (= *puṣtū*):

x	2	3
1 2 3	4 5	6 7
tā ka dhin	dhā dhā	dhā dhin

or:

2	3	x
1 2 3	4 5	6 7
tā ka dhin	dhā dhā	dhā dhin

or:

x	2	3
1 2 3	4 5	6 7
tin . naka	dhin .	dhā ge

The *dādrā*[58] is a small *ṭhumrī* in rapid speed. It does not use *bol-tāns* (i.e. variations sung to phrases or words of the song text) and is based on *dādrā tāla*:

x	0
1 2 3	4 5 6
dhā dhin nā	dhā tin nā

[57] Cf. Vani Bai Ram, Glimpses, p. 67; Danielou, Inde du Nord, p. 80; BhātKPM. IV, p. 51

[58] Cf. Gosvami, Story, p. 135 f.; Danielou, o.c., p. 80.

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Similarly the *khārvā* is a small *ṭhumrī* based on *kharvā tāla*:

x		2		0		3				x		0	
1	2	3	4	5	6	7	8	or:		1	2	3	4
dhā	ge	nā	tin	na	ka	dhin	nā			dhāg	tin	tāg	dhin

The *rekhtā* is a *ṭhumrī* with a text containing a considerable number of couplets (up to twelve).

There is a special category of songs which do not have a proper text but are sung to meaningless syllables (*nom*, *tom*, etc.) or syllables indicating drum beats (*bols*) sometimes interspersed with detached words. This device used in the *taranā*[59] and the *tirvat*[60] (a favourite song of boatsmen and porters) is ascribed to Amir Khusrau, who is alleged to have invented the *taranā* in order to disguise his difficulties with the Sanskrit language. It is however much more likely to be an ancient Indian technique, since it is already referred to in the Nāṭyaśāstra.[61]

A somewhat similar principle is met with in the *sargam*,[62] which uses solfa syllables as text. This song is a simple composition based on a particular rhythmical cycle (*tāla*) and a particular melodic pattern (*rāga*).

In imitation of the Arabian *nauba* suite[63] consisting of four parts, viz. *qaul*, *ghazal*, *taranā* and *furūdāšt*, Indian composers probably introduced the *caturaṅga*. But this composition (like its Arabian model also in four parts,[64] viz. *khyāl*, *sargam*, *taranā* and *tirvat*) never became very popular.

A composition shared in common by both North and South Indian music is the *rāga*.[65] This is an entirely improvised vocal or instrumental composition which may take several hours to perform. In the case of a vocal improvisation, the soloist singer uses meaningless syllables (*a-kā-ra* or *ta-na-ri-na*) as text. Traditionally this type of composition is developed along the following lines:

First, a non-rhythmical introduction (*ālāp* or *ālāpana*) is performed by the soloist while the accompanying drummer (player of *tablā* or *mṛdaṅga*) remains

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[59] Cf. Gosvami, Story, p. 137; Vani Bai Ram, o.c., p. 66; Danielou, o.c., p. 78 f.

[60] Cf. Gosvami, o.c., p. 137.

[61] BhN. 33, 42 (ed. Ghosh); Ghosh, Transl., II, p. 166 f.

[62] Cf. Gosvami, o.c., p. 137.

[63] Cf. H. Hickmann, Die Musik des arabisch-islamischen Bereichs, in: Handbuch der Orientalistik, Ergänzungsband 4, Orientalische Musik, Leiden 1970, p. 89.

[64] Cf. Gosvami, o.c., p. 137; Agarwala, Traditions and Trends, p. 55 f.; Ahmad G. Chagla, Muslim Contribution to Indo-Pakistan Music, in: Pakistan Miscellany, Karachi 1952, p. 165; BhātKPM. IV, p. 52.

[65] Cf. Ravi Shanker, My Music, My Life, London 1968, p. 32; P. Sambamoorthy, South Indian Music, Book 4, Madras ³1963, p. 9 f.

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silent. This part of the composition aims at preparing the mind of the listener for the specific emotion (*rasa*) to be expressed in the mode or melodic pattern (*rāga*) upon which the improvised composition (*rāga*) is based. With this end in view the *ālāp(ana)* exposes all the basic melodic elements, the so-called "essentials" (*lakṣaṇa*) of the rāga melody that has been selected: its predominant notes (*vādin* and *saṃvādin*), its ascent (*āroha*) and descent (*avaroha*), as well as characteristic motifs, themes or musical phrases (*pakaḍ*). This tone material is first produced in the lower octave (*mandra saptaka*), always starting from and returning to the tonic sa (i.e. the first note of the middle octave). Then the same material is repeated in the middle (*madhya*) and upper (*tāra*) octaves. The notes of the *ālāp(ana)* are only presented in their melodic context without being obliged to fit into a specific rhythm, and they are adorned with all kinds of musical embellishments, such as slide (Hind. *ghasit*; Tamil: *jāru*), deflection of the strings of a stringed instrument (Hind. *mīḍ*, *mīr* or *mīnd*; Tamil: *nokku* and *odukkal*), acciacatura (Hind. *krintan* or *kaṇ*), turn (Hind.. *khatkā*; Tamil: *ravai*), pralltriller (Hind. *murkī*), mordent (Hind. *ulṭā murkī*; Tamil: *sphurita*), shake (the range of which may vary from a quarter tone to a minor third; Hind. *gamak*; Tamil: *kampita*), etc.[66]

The *ālāp* procedes with some melodic phrases in a kind of free rhythm which has not yet assumed the form of a particular cycle of beats (*tāla-āvarta*). This section of the introduction is called *jor* or *joḍa*.

In an instrumental *rāga* improvisation the *ālāp* is mostly concluded with a *jhala*. This section consists of alternating the notes of the melody with rapidly plucking the bourdon strings (*cikarī*) of the stringed instruments (especially *sitār* and *sarod*). This *jhala*, which due to its being executed in ultrafast speed works up to a real climax, may also be performed at the end of the whole *rāga* improvisation.

The second part of this improvised composition is based on one or more specific rhythmical patterns (*tāla*), which afford the drummer (in Hindustānī music playing a pair of *tablās*; in Karṇāṭak music playing the long, double-face drum named *mṛdaṅga*) ample scope for all kinds of rhythmical variations. In this section the soloist introduces a melody (Hindustānī *gāt*, comparable to the Karṇāṭak *pallavi*) from an existing composition (a classical work or a folksong), or one that he has himself composed. This melody is taken as a starting point for a set of melodic and rhythmic variations. Soloist

[66] For the Hindustānī musical ornaments compare Nikhil Ghosh, Fundamentals, p. 90 f. For the Karṇāṭak ornamentations compare H.S. Powers, The Background of the South Indian rāga-system, vol. 1, Princeton University 1959, ch. VII and p. 197-199.

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and drummer, who is no mere accompanist, are equally important and frequently become involved in a kind of musical contest displaying the skill and inventiveness of each in intricate melodic and rhythmic patterns. Towards the end of the composition the speed is gradually accelerated and sometimes the rhythm is based on a new tāla. Here too, the soloist may introduce new melodies, but he is bound to develop his motifs and themes from the basic notes and characteristic phrases of the fixed melodic pattern (*rāga*).

A number of rāgas (a minimum of four) may be combined in a single composition called *rāgamāla* or *rāgamālikā* ("garland of rāgas"). As this form, which is sometimes also used by North Indian musicians, is very popular in the South, it will be discussed later under Karṇāṭak compositions.

In recent times the musicologists Bhātkhaṇḍe and Ratanjankar introduced a South Indian type of composition in North Indian music, the so-called *lakṣya gītas*.[67] Like the Karṇāṭak *lakṣaṇa-gītas*, these short educative songs describe the essential features (*lakṣaṇa*) of a rāga melody.

Next, we may distinguish the following Hindustānī compositions which have a specifically religious character.

First the *bhajana*,[68] a song of praise dedicated to a particular deity, sung in all parts of India. It is always performed by a chorus and accompanying instrumentalists under the direction of a leader (*bovā*). Its text often centres round an episode taken from the great epics, the Mahābhārata and the Rāmāyaṇa. Famous poet-musicians such as Tulsīdās, Sūrdās and Mīrabai have given expression to their religious fervour in this type of composition.

Another type of laudatory song dedicated to a particular deity (Kālī, Kṛṣṇa, etc.) is the *kīrtana*,[69] which is performed by a solo singer and chorus (in the same manner as the responsorial songs of ancient Jewish synagogal music and the Gregorian chant of the early Christian church).

In Bengal, due to the influence of the great mystic and innovator of Vishnuism, Chaitanya (born in the last quarter of the fifteenth century), the *Kṛṣṇa-kīrtana* held a prominent position. This *kīrtana* developed along two lines: the simple *nām-kīrtana* for the common folk; and for the educated the more sophisticated *līla-kīrtana*, which demands great skill on the part of the singer and of the drummer (playing the *khol*). The source of both types is the same: i.e. *bhakti* or "complete devotion", a state of mind

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[67] Vani Bai Ram, Glimpses, p. 62.

[68] Van Bai Ram, o.c., p. 62; A. H. Fox Strangways, The Music of Hindostan, Oxford 1914, p. 286.

[69] A. A. Bake, Kīrtan in Bengal, in: Indian Art and Letters, New Series, 21, 1 (1947), p. 34-40.

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entailing tranquility (*śānta*), humility (*dāsya*), friendship (*śākhya*), motherly love (*vātsālya*) and finally the mystical experience of union with God.

In the *nām-kīrtana* the different names of Viṣṇu in his various manifestations as Hari, Rāma, but especially as Kṛṣṇa, are sung in endless succession. The central theme of the *līla-kīrtana* is the *līla* ("love-sports") of Kṛṣṇa with his beloved Radhā and her comrades, the shepherds and shepherdesses in the groves of Brindavan (Vṛndāvana). The text of a *līla-kīrtana* is a lyrical poem by one of the masters of the Chaitanya school (Paramānanda Dās, Narottam Dās, Locan Dās, Vṛndāvana Dās, Jñāna Dās, etc.),[70] or by an earlier poet (Jayadeva, Chandidās, Vidyāpati).

The *kīrtans* sung during religious meetings are performed as a cycle of songs (*pāla*, lit. meaning "story"). Some of these cycles which refer to particular seasons or festivals are especially meant to be performed on those occasions, as for instance the *holi* at the festival of that name, the *basanta* during the spring season, the *jhulan* at the festival of swings, etc. The *pālas* usually describe episodes of Kṛṣṇa's life; in the *goṣṭha*, for example, the boy Kṛṣṇa goes to the meadows with his cows and his flute. In the *rās* cycle, the *rāslīla*, the divine dance of Kṛṣṇa and the *gopīs* is the central theme. The *māthur*, which is less joyous and idyllic than the other pālas, expresses the pains and sorrow of separation when Kṛṣṇa has left Vṛndāvana to go to Mathurā. The *rūp* or *rūpanurāg* describes the final stage of *bhakti* in which the devotee who has once seen God longs for the mystic union.

Every *kīrtan* performance starts with an introductory song, the *gaurcandrikā*, which is meant to uplift the devotee into the spiritual sphere. In these introductions a particular episode from the life of the leader of the Bengal *vaiṣṇava* mystics, Chaitanya, is chosen as the main theme; the choice of episode depending on how closely its spiritual content matches the character of the particular *kīrtan* cycle to be executed. The great *kīrtan* expert, the late Professor Bake,[71] suggests that the *gaurcandrikā* might be a modification of the *nāndī* section which precedes Sanskrit dramas.

South Indian (Karṇāṭak) compositions

Compared with North Indian music, at first the Western listener may experience more difficulty in tracing the melodic line in South Indian music, since on account of its florid style — the performer's exuberant ornamentation technique — the main notes of a melody are almost completely obscured by the embellishments. Nevertheless as his ears gradually grow

[70] Cf. Sukumār Sen, Bangla Sāhityer Itihāsa, vol. 1, part 1, Calcutta [5](1970), p. 401 f.
[71] Bake, Kīrtan in Bengal, p. 39.

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accustomed to the somewhat complicated melodic line of Karṇāṭak music, he will find its compositions easier to follow as regards structure than their Hindustānī counterparts.

Concert and educational music

As a rule Karṇāṭak compositions of this category, though originally being vocal compositions, also admit instrumental performance.

First we shall discuss the well known *kriti* composition, which has been handled by almost every South Indian composer. According to Sambamoorthy[72] the *kriti* developed out of the older *kīrtanas* composed by the fifteenth century Tāllapakam composers Annamācārya (1408-1503), Pedda Tirumalayyaṅgar (son of the former) and Cinnayya (grandson of the former), who were the first to compose *kīrtanas* consisting of the three sections known as *pallavi*, *anupallavi* and *caraṇa*.

Whereas in the *kīrtana* the devotional text prevails, the *kriti*, which originally shared the same religious character, came to represent absolute music, where the music itself is of more importance than the text. The classical *kriti* is no longer a purely religious composition. Its subject may be either ethical or didactic. As to its literary form, the *kriti's* text may be either prose or poetry, while the *kīrtana* has retained its poetical form.

In a vocal performance the soloist singer is accompanied by a second singer, a violin player and a rhythmic group. The second singer and the violinist[73] follow the soloist's melodic line in heterophonic style and fill in its pauses with imitations. The rhythmic group[74] lends support to the singers and the melodic instruments by providing the basic rhythm, but from time to time also performs rhythmic variations (including polyrhythmic patterns) within the given rhythmic cycle (*tāla-āvarta*).

A classical *kriti* composition generally has the following structure:[75]

The *ālāpana*: Like the longer North Indian compositions, South Indian compositions, such as the *kriti*, *varṇam*, etc., are preceded by a non-

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[72] P. Sambamoorthy, History of Indian Music, Madras 1960, p. 62. Regarding the Tāllapakam composers, the reader might compare: P. Sambamoorthy, Dictionary of South Indian Music and Musicians, II, Madras 1959, p. 367; SambH. p. 63 and P. Sambamoorthy, South Indian Music, IV, [3]1963, p. 193.

[73] who plays a Western violin in the Indian style, i.e. by using a particular slide technique (*jāru*).

[74] i.e. musicians playing the long, double face drum (*mṛdaṅga*), the earthenware pot (*ghaṭam*) and the tambourine (*kañjīra*).

[75] Compare P. Sambamoorthy, South Indian Music, III, p. 132-180, especially p. 173.

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rhythmic introduction which presents the basic melodic material of the rāga to be used in the composition.

The *pallavi*: One or two lines of the text are set to a melody, which is the dominating theme of the composition and which is always based on the elementary melodic curve (*saṃcāra*)[76] of the rāga. This is the *pallavi* theme which, as it is repeated several times throughout the composition, can be regarded as the musical refrain. Immediately after the *pallavi* theme has been introduced the musician performs a number of variations (*saṃgati*),[77] some of which may have been prescribed by the composer. In these variations, each of which is usually executed twice, the *pallavi* melody is gradually developed from its elementary form ("Flachvariante")[78] into more elaborate patterns ("Vollvariante", "überwölbende Variante" and "Spitzenvariante")[79] by means of ornamentation[80] and figuration.[81].

The *anupallavi*: When the *pallavi* section is finished, the next two lines of the text are set to a melody which is the second important theme of the composition. While the *pallavi* theme does not usually extend beyond the middle octave, the *anupallavi* theme, which mostly has its tonal centre in the higher tetrachord of the middle octave, may reach into the higher octave. The *anupallavi* may be compared with the second theme in the dominant tonality in Western classical music, but it does not produce the same contrasting effect as its Western equivalent. The South Indian *pallavi* and *anupallavi* should be respectively regarded as the first and second phrase of one melody, separated by a set of variations on the first phrase. The *anupallavi* phrase is worked out in the same way as the *pallavi*'s namely the theme is gradually developed in a series of variations (*saṃgati*).

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[76] The *saṃcāra* of Karṇāṭak music is comparable to the *pakaḍ* of Hindustānī music.

[77] According to SambH., p. 64 Tyāgarāja was the first composer to introduce *sangatis* in his *kritis*.

[78] Compare J. Kuckertz, Form und Melodiebildung der karnatischen Musik Südindiens, I, Wiesbaden 1970, p. 127, note 15.

[79] See note 78.

[80] i.e. the procedure of adorning the melody with grace notes such as: mordent (*sphurita*), turn (*ravai*), acciacatura in the function of alternating note (*janta svara*) between two notes of the same pitch, slide (*jāru*), shake or vibration (*kampita*) and deflection (of the strings of a stringed instrument: *nokku*, *odukkal*). Musical ornamentation, however, is not confined to the *pallavi* theme. In Karṇāṭak music every melody, or rather, every simple series of notes is invariably presented with some kind of musical embellishment. In Indian music in general, but especially in Karṇāṭak music, ornamentation is part of the technique of the performing artist (vocalist as well as instrumentalist).

[81] The present writer uses the term "figuration" to indicate the procedure of adding musical "figures", i.e. particular motifs or series of notes, to a basic melody or basic musical theme.

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The *citta(i)svara(m)*: After the *anupallavi* has been completed, sometimes a *cittasvara* follows. This is a kind of "cadenza", sung as a solfeggio on the Indian tone syllables *sa*, *ri*, *ga*, etc. This section consists of a number of musical phrases based on the elementary melodic line of the rāga (*rāga-saṃcāra*). When *ādi tāla* is used, these phrases cover two or four complete rhythmic cycles (*tāla-āvarta*), and eight or sixteen cycles, when *cāpu*, *tripuṭa* or *rūpaka tāla* is used.

The *pallavi*: After the *cittasvara*, or when this section has been omitted then immediately following the *anupallavi*, the *pallavi* theme is repeated. Here as a rule one of the more developed patterns ("Vollvariante"), i.e. the first or second variation (*saṃgati*) of the *pallavi* theme, constitutes the refrain.

The *caraṇa(m)*: The *caraṇa*, which usually contains four lines of the text, is an indispensable section of the *kriti*. Even the older *kīrtana* always had a number of *caraṇas* which, like the couplets of a strophical song, may all have been set to the same melody. This procedure is still followed in the classical *kriti*. The melody of the first two lines of a *caraṇa* may introduce a new aspect of the *rāga-saṃcāra*, while the last two *caraṇa* lines often quote melodic material from the *anupallavi*. In many cases the complete *caraṇa* appears to be a development ("Durchführung") of the thematic material of both the *pallavi* and the *anupallavi*. The *caraṇa* section of the *kriti* sometimes uses a special variation technique called *niraval*, which can be described as follows: After having performed one or more *caraṇas*, the soloist may improvise a series of melodic variations on the *caraṇa* melody. In these variations based on the complete text or on a few lines or words of the *caraṇa* that has been performed, the melodic line is changed, while the rhythmic structure, or rather the rhythmic arrangement of the words in the rhythmic cycle (*tāla-āvarta*), is retained intact. Śyāma Śāstrī's *kriti* composition "Saroja daḷa nētri himagiri" provides a beautiful example of this technique, which resembles the *talea* principle in the isorhythmic motets of the fourteenth century European Ars Nova.

The *cittasvara*: Mostly a lengthy "cadenza" is performed after the *caraṇas*. This second *cittasvara*, like the first, may also be sung to mere tone syllables; but when, in a vocal performance, the melody of the first *cittasvara* following the *anupallavi* is repeated after the *caraṇas*, it should be sung to a text (*sahitya*).[82] Sometimes both text and music are

[82] We may find the same principle in European music of the Middle Ages, that is to say, in the textual *tropae* to the melismatic melodies of Gregorian chant.

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capable of being executed in the reverse order (*viloma-svara-sāhitya*). *Cittasvaras* generally end up with a beautiful concluding phrase (*makuṭa*, lit. meaning "crown"); here the setting of the text uses the device of *srotovaha yati*[83] which means that the number of syllables within the tāla cycle is gradually increased. *Cittasvaras* usually present a particular aspect of the *rāga-saṃcāra* that has not appeared elsewhere in the *kriti*. Sometimes *cittasvaras* are the composer's own creation, but in other cases they have been composed by his students or by later composers. Whereas the first *cittasvara* following the *anupallavi* is executed in the same speed as the other parts of the *kriti*, the speed of the second *cittasvara*, which comes after the *caraṇa*, is faster.

Towards the end of the *anupallavi* and the *caraṇa* occasionally a special technique, the so-called *madhyamakāla sahitya* is applied, that is to say, the text of one or two tāla cycles (*tāla-āvarta*) is set syllabically, which increases the number of notes in the *āvarta* and gives an impression of acceleration, although as a matter of fact the tempo itself has not changed.

The *pallavi* (or *anupallavi*): At the conclusion of the *kriti* composition either the *pallavi* refrain or the *anupallavi* theme is repeated.

The *varṇam*[84] is a classical Karṇāṭak vocal composition which is almost as important as the *kriti*. Due to the fact that this type of composition requires great skill and a detailed knowledge of rāga characteristics (*rāgalakṣaṇa*), relatively few *varṇams* have been composed in course of time. The text of a *varṇam* generally expresses feelings of devotion (*bhakti*) or love (*śṛṅgāra*).

Its musical structure, which has the same basic elements as the *kriti*, can be described as follows:

The *ālāpana*: A *varṇam* usually starts with the commonly met non-rhythmic introduction.

The *pallavi*: This section contains the main theme (*pallavi*), which has its tonal centre in the first tetrachord of the middle octave, and its variations (*saṃgati*).

The *anupallavi*: The section following the *pallavi* introduces the second theme (*anupallavi*), which has a higher tonal centre, as in the case of the *kriti*'s *anupallavi*, and contains the usual variations.

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[83] The opposite principle, a gradual reduction of the number of syllables within the *tāla-āvarta*, is called *gopuccha yati*. The so-called *mṛdaṅga yati* is a combination of both principles.

[84] Compare SambH., p. 68 and SambSIM. III, p. 125-132.

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The *muktayi svaras*: A cadenza-like episode consisting of mere solfa syllables resembling the *cittasvara* of the *kriti* composition follows the *anupallavi*.

The *pallavi*: As in a *kriti* composition, the first part of a *varṇam* is completed with a repetition of the *pallavi* theme. Throughout the whole of this first part each *āvarta* is executed twice but, contrary to the practice followed in the kriti, the variations (*saṃgati*), if any, are only executed once.

The *caraṇa*: This section, which constitutes the second part of a *varṇam*, consists of several lines of the text set to different melodies and a number of solfeggio cadenzas (*ettugada svaras*) up to a maximum of five which gradually increase in length.[85] Each line of the text corresponding to one musical phrase of the *caraṇa* is followed by a solfa passage (*ettugada svara*), after which the preceding line of the *caraṇa* is repeated.

The *anubandhu*: A coda-like supplementary section, called *anubandhu*, appeared at the end of the older *tāna-varṇams*, such as the famous *varṇam* "Viribōṇi" by Ādiyappayya Paccimiriyam (born 1730), which is performed by practically every student of South Indian music. The *anubandhu* mostly consisted of a solfa episode and an episode with a regular text. Sometimes however, this coda merely repeated the *muktayi svaras* and the *pallavi*. Later composers such as Vīṇā Kuppayyar preferred to omit this section.

In the course of time the following three types of *varṇam* have emerged:

1. The *tāna-varṇam*, which is the oldest type of *varṇam*. According to Sambamoorthy[86] the above mentioned composition "Viribōṇi" in *bhairavī rāga* and *aṭa tāla* was the first true *tāna-varṇam*. The famous composers Śyāma Śāstrī, Vīṇa Kuppayyar, Pallavi Gopālayyar, Svāti Tirunāl, Muttusvāmī Dīkṣitar, Patnam Subrahmanya Ayyar and others[87] adopted this type of composition. Its name is probably derived from the fact that *tānas* (i.e. ancient types of musical phrases consisting of a series of notes or scale motifs repeated in sequences)[88] are the main feature of a *tāna-varṇam*. Its passages containing a regular text are relatively few and short whereas its solfeggio passages tend to be more extensive. This type of composition

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[85] If in *ādi* or in *aṭa tāla* the first *ettugada* covers one *āvarta*, the last *ettugada* may contain two, three or four *āvartas*. However, in *rūpaka tāla* the first *ettugada* may comprise four *āvartas*, the last up to sixteen.

[86] SambH., p. 68.

[87] Compare SambSIM. III, p. 132.

[88] i.e. each repetition starting from the next higher or lower note in the rāga scale.

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also shows a preference for the longer tāla cycles, such as *ādi* (4 + 2 + 2), *tripuṭa* (3 + 2 + 2), *aṭa* (5 + 2 + 2) and *jhampa* (7 + 1 + 2).

2. The *pada-varṇam*, also called *chauka-varṇam* or *aṭa-varṇam*, is a composition which resembles the *padam* to be discussed later on. Being the fourth part of the *bharat-nāṭyam* dance suite,[89] the *pada-varṇam* is a song intended to be danced. Unlike a *tāna-varṇam*, the text of a *pada-varṇam*, sung very slowly, is of great importance since it is the basis on which the dancer expresses through gesture (*abhinaya*) the sentiment (*rasa*) and its manifestation (*bhāva*) contained in the words. Generally speaking the entire composition has a text (*sahitya*), although drum syllables (*solkaṭṭu*) occur incidentally. *Muktayi svara* and *ettugada svara* episodes are first sung to tone syllables, the second time to a regular text. As a rule the dancer performs the text episodes (*sahitya*) of a *pada-varṇam* in *abhinaya* style (i.e. using the language of gesture), and the solfeggios as pure dance (*nṛtta*). Since the dancer's feet follow the rhythm of the music, a *pada-varṇam* has less complicated tāla cycles (e.g. the *rūpaka* tāla = 2 + 4) than a *tāna-varṇam* has. According to Sambamoorthy,[90] Rāmasvāmī Dīkṣitar, the father of the famous composer Muttusvāmī Dīkṣitar, was the first to compose this type of *varṇam*. His song "Valachi vaccinā nura" in *hindola-vasanta rāga* and *rūpaka tāla* is a well known example of a *pada-varṇam*. Muttusvāmī Dīkṣitar, king Svāti Tirunāl and Mysore Sadaśiva Rao also composed *pada-varṇams*.

3. The *rāgamālika-varṇam* is a type of *varṇam* which is usually classified under the *tāna-varṇam*; some *rāgamālika-varṇams* however belong to the category of *pada-varṇams*.[91] As regards its structure, the *rāgamālika-varṇam* is a composition in which the sections (*pallavi anupallavi*, *muktayi svara*, *caraṇa* and *ettugada svara*) are composed in different rāgas.

The Karṇāṭak composition known as *padam* (an ancient term referring to the text or "verbal theme"[92] of a song) is comparable to the Hindustānī *ṭhumrī*. It is a lovesong of a highly spiritual character dominated by the erotic sentiment (*śṛṅgāra rasa*) expressed in a variety of emotional situations described by the text. This eroticism is however purely symbolic, since the essence of the *padam* is religious devotion (*bhakti*). Therefore the main characters portrayed in the song, the hero (*nāyaka*), the heroine (*nāyikā*) and the friend (*sakhī*), respectively stand for God (*Paramātman*),[93] the devotee

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[89] Enakshi Bhavnani, The Dance in India, Bombay 1965, p. 34 f.

[90] SambH., p. 68.

[91] SambSIM. III, p. 129.

[92] Compare Bharata's Nāṭyaśāstra 28, 16 f. (Baroda ed.); M. Ghosh, Translation of the Nāṭyaśāstra, II, Calcutta 1961, p. 4, ch. 28, 16-17. Cf. also p. 3, ch. 28, 8 of the same work.

[93] In the Tamil songs: Subrahmanya; in the Telugu songs: Kṛṣṇa. Compare SambSIM. III, p. 202.

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and his spiritual teacher. The seventeenth century composer Kṣetrayya, who signs Muvva Gopāla to his compositions, is regarded as the father of the Karṇāṭak padam.[94] and his Telugu *padams* are still sung at concerts. Another famous composer of *padams* (in Kanarese) is Purandara Dāsa (1484-1564).

Although the *padam* is sung at concerts of classical music, it is strictly speaking a dance form. In the *bharat nāṭyam* dance suite this song is usually performed immediately after the *varṇam*. Its musical structure is as follows: First the singer introduces the main theme or burden of the song (*pallavi*), which he (or : she) repeats several times without any real variation (*saṃgati*), while the dancer interprets the line of the poem differently each time. Then the *anupallavi* theme consisting of two lines is sung. Finally one or more *caraṇas* consisting of three lines each are executed. While the *pallavi* theme may be used in the first part of the *caraṇa*, the last part of the *caraṇa* is frequently based on melodic material from the *anupallavi*. If there are more *caraṇas* than one, all of them are set to the same music. A *padam* melody generally avoids complicated rāga patterns. Well known rāgas, such as *bhairavī*, *kalyāni*, *kāmbodhi*, *sāveri* and *vasanta*, are chosen as basic mode. As a rule the *padam* is in slow tempo, although in a few cases moderate speed is used.[95]

In the nineteenth century[96] a lighter type of Karṇāṭak lovesong, namely the *jāvali* made its appearance. The text of this song, which may be compared with the Hindustānī *ghazal*, is purely erotic without trace of the *padam*'s spiritual background. The music, usually based on well known rāgas, does not always adhere to the strict rules of rāga. Phrases borrowed from other rāgas may be combined with phrases based on the main rāga. A *jāvali* has the same three part musical structure as the *padam* and shows preference for the *ādi* (4 + 2 + 2), *rūpaka* (2 + 4) and *cāpu* (3 + 4) tālas. King Svāti Tirunāl, Patnam Subrahmanya Ayyar, Dharmapure Subbarāyar and many other famous musicians[97] have composed songs of this lighter genre.

The term *gīta(m)* covers several types of less complicated compositions especially intended for the student of Karṇāṭak music who has just passed his elementary exercises in intervals (*svara*), rhythm (the *ālaṅkāras* in the tālas) and ornamentation (*gamaka*). Gītas are always composed in a steady, moderate speed and any of the seven tālas or their varieties may be used.

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[94] SambH., p. 65.
[95] SambSIM. III, p. 203.
[96] SambH., p. 66.
[97] SambSIM. III, p. 217.

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The number of notes, however, is limited in the sense that the number of svaras in each rhythmic cycle (*tāla-āvarta*) — long notes (*dīrgha*) counting as double svaras — must equal the number of basic time units (*akṣarakāla*).

There are two main types of *gīta*:

1. The *sañcārī-gīta*, also known as the *sāmānya-*, *sādhāraṇa-*, or *lakṣya-gīta*. The text of this type of *gīta* praises a deity. Sometimes the text proper is interspersed with meaningless syllables, such as *a iya, ti iya, a iyam, vā iyam*, called *mātrika padas*. The *sañcārī-gīta* is a continuous composition without sections, repetitions or variations (*saṃgati*). The so-called *pillāri-gītas* composed by Purandara Dāsa in praise of Vighneśvara, Maheśvara and Viṣṇu are familiar to every student of Karṇāṭak music. Paidāla Gurumūrti Śāstrī, who is said to have composed about thousand *gītas*,[98] is also famous for his *sañcārī-gītas*.

2. The *lakṣaṇa-gīta*. The text of this type of *gīta* describes the musical characteristics (*lakṣaṇa*) of particular rāgas. When describing one of the principal rāgas (*rāgāṅga* rāgas) these *gītas* have three sections: *sūtra-khaṇḍa*, *upāṅga-khaṇḍa* and *bhāṣāṅga-khaṇḍa*. The text of the *sūtra-khaṇḍa* provides information about the basic notes of the scale (*mela*) of the main rāga and its classification number, while the second and third sections enumerate the derivative rāgas, that is to say the *upāṅga* and *bhāṣāṅga* rāgas respectively. *Lakṣaṇa-gītas* have been composed by Govinda Dīkṣitar, Veṅkaṭamakhin,[99] Paidāla Gurumūrti and Govindācārya[100] amongst others.

The *svarajāti* is another educational composition. It is to be studied after the *gītas* as preparation for the more intricate *varṇam*. It has the traditional three part structure (*pallavi, anupallavi, caraṇa*) and is furnished with a text which may be devotional, heroic or erotic. According to Sambamoorthy[101] the earliest *svarajāti*, "Emāyalādi" in *huseni rāga* and composed during the eighteenth century, was a dance composition incorporating phrases (*jāti*) sung to drum syllables (Tamil: *solkaṭṭu*; Sanskrit: *paṭa*). It was the celebrated composer Śyāma Śāstrī (1762-1827) who remodeled the *svarajāti* for concert performance and omitted the *jāti* passages. His *svarajātis* and similar compositions by Ādiyappayya and Svāti Tirunāl[102] are known to every student of Karṇāṭak music.

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[98] Compare SambSIM. II, p. 39.

[99] The author of the musical treatise Caturdaṇḍīprakāśikā, dated 1620.

[100] For the *lakṣaṇa-gītas* of this eighteenth century musicologist the reader might consult his theoretical work, the Saṃgrahacūḍāmaṇi, ed. by S. Subrahmanya Śāstrī, Madras 1938. Cf. also SambSIM. III, p. 125.

[101] SambH., p. 67; SambSIM. II, p. 42 f.

[102] Compare SambSIM. II, p. 43.

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The *jātisvaram* is a pure dance composition which originated in the nineteenth century. It is usually performed as the second item in the *bharat nāṭyam* cycle. At first all the three parts (*pallavi*, *anupallavi* and *caraṇa*) of a *jātisvaram* were sung to phrases (*jāti*) consisting of drum syllables (*solkaṭṭu*), but in later times these were replaced by solfa syllables (*svara*). Svāti Tirunāl and the Tanjore composers Ponnayya, Śivānandan, Vadivelu and Vīṇā Kṛṣṇamācari have written *jātisvaras*.[103]

The *tillānā* is another dance composition,[104] which is performed at the end of the *bharat nāṭyam* cycle. Sometimes a *tillānā* is also used to terminate a concert of classical music. Sung to drum and solfa syllables interspersed with isolated words, the *tillānā* is the counterpart of the North Indian *taraṇa*. It has the traditional three part structure (*pallavi*, *anupallavi* and *caraṇa*). Whereas the concert *tillānās* executed in slow speed are adorned with some variations (*saṃgati*), the dance *tillānās* performed in moderate speed are simpler. In the dance cycle the brilliant *tillānā*, which displays pure dance movements (*nṛtta*), contrasts with the preceding *padam*, which contains long expositions in the language of gesture (*abhinaya*). At concerts of classical music the short, lively *tillānā* comes as welcome relief after the long, scholarly *pallavi*. Most *tillānās* are composed either in *ādi* (4 + 2 + 2) or in *rūpaka* (2 + 4) *tāla*. Śrīnivāsa Ayyangar's *tillānā* in *lakṣmīśa tāla*, which has 24 basic time units (*akṣarakāla*) in the rhythmic cycle (*tāla-āvarta*),[105] and Mahavaidyanātha Ayyar's *tillānā* in *siṃhānandana tāla*, which has 128 *akṣarakālas* in the *āvarta*,[106] are exceptional forms of *tillānā*. Svāti Tirunāl, Mysore Sadaśiva Rao, Patnam Subrahmanya Ayyar and the distinguished *vīṇā* expert Vīṇā Sesanna of Mysore deserve mention amongst prominent composers of *tillānās*.[107]

Rāgamālikā. Most South as well as North Indian compositions do not allow use of more than one rāga per composition. The composer or the performing artist is always restricted to the particular rāga that he has once chosen as basic mode and basic melodic pattern for the composition he is about to write or improvise. However in Karṇāṭak music, and incidentally also in Hindustānī music, there is one type of composition which disregards this principle. In this composition, called "garland of rāgas" (*rāgamālikā*), the sections (*pallavi*, *anupallavi* and *caraṇas*) are based on different rāgas.

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[103] Compare SambH., p. 68 and SambSIM. II, p. 44.

[104] For a more detailed description of the Bharat Nāṭyam dance cycle, consisting of 1. *alārippu*, 2. *jātisvaram*, 3. *śabdam*, 4. *varṇam*, 5. *padam* and 6. *tillānā* the reader may consult Bhavnani, The Dance of India, p. 33-35 and SambSIM. IV, p. 200-203.

[105] Compare SambSIM, IV, table XIII (p. 152-162), no. 106.

[106] Compare SambSIM. IV, table XIII, no. 37.

[107] Compare SambSIM. III, p. 223.

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As suggested by Sambamoorthy[108] this musical form may have had its equivalents in early Indian music. The ancient *rāgakadambaka*, which he alludes to in this connection, is referred to by Śārṅgadeva in his thirteenth century Sanskrit treatise, the Saṃgītaratnākara as being a type of *aliprabandha* composition.[109] The fifteenth century royal author Kumbhā,[110] who gives a more detailed description than Śārṅgadeva[111] does, defines the *rāgakadambaka* as a composition in which different rāgas could be used[112] and which consists of six sections.[113] The resemblance to the modern Karṇāṭak *rāgamālikā*, which contains a *pallavi*, an *anupallavi* and an obligatory minimum of four *caraṇas*, is striking. In the ancient *rāgakadambaka* the first section was repeated several times, just as the *pallavi* section is in the modern *rāgamālikā*, and each repetition was followed by one of the other sections.[114] Moreover the ancient "garland of rāgas" was also composed in various tālas,[115] a device only found in the modern *rāgatālamālikā* where the sections are set to different rāgas as well as to different tālas. On the other hand the ancient *rāgakadambaka* used several tālas in the same section, whereas the modern *rāgatālamālikā* has only one tāla per section.

The modern Karṇāṭak *rāgamālikā* based on various rāgas (the minimum being four) is a lengthy vocal composition which may take a couple of hours to perform. Here it is interesting to note that the celebrated *72-melarāgamālikā* composed by Mahavaidyanathā Ayyar (1844-1883) in eight days takes two hours to perform. Traditionally the rāgamālikā has the following structure.[116]

The *pallavi* containing the main musical theme, which is always based on the primary rāga and which is repeated after each section.

The *anupallavi* introducing the second theme based on a new rāga or on

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[108] SambH., p. 61.

[109] ŚārṅSR. 4, 26.

[110] KuSR. 2, 4, 3, 22-34.

[111] ŚārṅSR. 4, 253-256.

[112] KuSR. 2, 4, 3, 22: *yatra syur bhūrayo rāgaḥ sa syād rāgakadambakaḥ.*

[113] KuSR. 2, 4, 3, 23.

[114] KuSR. 2, 4, 3, 25: *anye bhavanti pūrvasmāt purvasmād uttarottaram.*

[115] viz. the first section in four tālas (cf. KuSR. 2, 4, 3, 24) and the following sections in two tālas (cf. KuSR. 2, 4, 3, 25). In ancient Indian music also other types of *rāgatālamālikā* or pure *tālamālikā* (i.e. a composition based on several tālas) may have been used. The medieval musicologists Śārṅgadeva and Kumbhā discuss these types of composition, called *śrīraṅga*, *śrīvilāsa*, *pañcānana*, etc. in their chapters on (*vi*)*prakīrṇa-prabandhas*, i.e. complex compositions. Cf. SārṇSR. 4, 265 ff. and KuSR. 2, 4, 4, 3 ff.

[116] Compare SambSIM. III, p. 187 f.; SambH., p. 61 f.

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the rāga of the *pallavi*. It is permissible to omit the *anupallavi* section in a *rāgamālikā* composition.

The *citta(i)svara(m)* consisting of a series of solfa passages.

The *caraṇas*, a minimum of four, composed in different rāgas. Each *caraṇa* has an episode containing a regular text, a solfeggio episode (*cittaisvaram*), and a traditional final phrase (*makuṭa svara*). This phrase, which is based on the rāga of the *pallavi*, functions as a connecting link between the preceding section using a new rāga and the reintroduction of the *pallavi* theme, which is repeated after each *caraṇa* in the original rāga. Occasionally, — this time with a regular text instead of tone syllables — the preceding *cittaisvaram* is repeated after the *pallavi* theme. In that case the *pallavi* theme is repeated a second time after the repetition of the *cittaisvaram*.

The *conclusion*, a section comparable to the coda in Western music. Here all the rāgas used reappear in inverted order (*viloma krama*) sung to solfa syllables (*vilomacittaisvaram*). Each rāga passage covers one complete, or half of a, rhythmic cycle.

The text of a *rāgamālikā* may be devotional, erotic, laudatory or educational in character.[117] Frequently, it names the rāgas that are about to be used (*rāga-mudra*) and sometimes even mentions the name of the composition itself, its composer or the composer's patron.

A favourite variety of the *rāgamālikā*, the *ghanarāga-tānamālikā*, — consisting merely of *tānas*[118] set to common, easily recognizable rāgas (*ghana* rāgas) — is usually performed at the beginning or in the middle of a programme of Karṇāṭak music. The *rāgamālikā* may also be combined with other forms of composition resulting in combinations such as the *rāgamālikā-varṇam*, the *rāgamālikā-kīrtana*, the *rāgamālikā-gīta* or *rāgamālikā-svarajāti*.

In composing a *rāgamālikā*, it is of major importance to choose correctly which rāgas are to be combined in the work. They must always have different basic scales (*melas*), but their aesthetic content (*rasa*) should be neither too contrasting nor too similar.

Having thus far discussed Karṇāṭak compositions which for the most part belong to the realm of precomposed music (*kalpita saṃgīta*), we shall now examine a type of composition which is to be classified under improvised music (*manodharma saṃgīta*).

The improvised composition called *pallavi* (not to be mistaken for the

[117] In the latter case the *rāgamālikā* text may treat a particular aspect of the theory of music.

[118] Compare the *tānas* in the *pallavi* composition to be discussed after the *rāgamālikā*.

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section of that name) is a form of music which has its roots in the musical contests held in India since ancient times.[119] It is of special interest to musicologists, since it expounds a wide variety of techniques of musical composition involving complicated melodic and rhythmic structures which are, of course, also met with in precomposed music. A *pallavi* performance demands great skill on the part of the musician, who has to master these techniques whilst improvising.

When a *pallavi* performance takes the form of a musical contest, the procedure is as follows: One (A) of the two competing musicians starts performing an *ālāpana* in a rāga of his choice. The second musician (B) must immediately recognize this rāga and invent extempore a musical theme (*pallavi*) based on it. Next, A must reproduce B's theme without the slightest modification and then add variations to it. If neither musician makes a mistake, the whole procedure starts again with A and B exchanging rôles. The contest is only finished when one of the musicians commits a fault.[120]

The improvised *pallavi* composition generally has the following structure:

The *ālāpana*, the non-rhythmic introduction is longer and more detailed than that of any other classical Karṇāṭak composition (*kriti*, *varṇam*, etc.). We may trace its development in the following stages:

a. The *ākṣiptikā*.[121] This first part of the introduction discloses the essential notes and the basic melodic line of the chosen rāga. This presentation of the rāga mostly starts from the first note (*ṣaḍja*) of the middle octave (*madhya sthāyī*), procedes into the lower (*mandra*) and middle (*madhya*) octaves, occasionally reaches into the higher (*tāra*) octave, and finally returns to the initial note (*madhya sthāyī ṣaḍja*). This brief sketch of the rāga may serve to assist the listener in identifying the rāga.

b. The *rāga-vardhani*, also called *karaṇam*.[122] According to Sambamoorthy[123] this part of the *ālāpana* has four phases, each with its own

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[119] Compare SambH. p. 96 f.; Jātaka story, no. 243.

[120] Compare SambSIM. IV, p. 22.

[121] This term is already used in ancient Indian theory of music to indicate a particular stage in the rāga development. However, the ancient *ākṣiptikā* section has a regular text and is set to a particular metrical cycle (*tāla*), whereas the modern *ākṣiptikā* has no rhythmic structure at all, and is sung to merely meaningless syllables. Cf. ŚārṅSR. 2, 2, 25 (definition) and vol. II, p. 23 f. (music example).

[122] This term, which is not clearly defined in ŚārṅSR., also appears at the top of some ancient music examples to indicate the second part of the rāga development.

[123] SambSIM. IV, p. 11 f.

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beginning (Tamil : *eduppu*) and conclusion (*muktāyi* or *vidārī*).[124] In the first phase of the *rāga-vardhani*, the rāga development starts from middle *sa* and is worked out in the lower octave. The notes are adorned with musical ornaments (*gamaka*) and arranged to form motifs and melodic phrases characteristic of the rāga. In the second and third phases the same development takes place in the middle and higher octaves respectively. The fourth phase is characterized by its ascending and descending scales (*mūrchanā*) and its fast passages.

c. The *sthāyī*, also called *makarini* or *vartani*.[125] A series of ascending and descending passages is performed according to the following principle: First descending-ascending passages starting from middle *sa*, middle *ri*, etc., i.e. taking each time a higher starting note (*sthāyī svara*), are executed. Next come ascending-descending passages starting from high *sa*, middle *ni*, middle *dha*, etc. until middle *sa* has again been reached. These scale passages, which require a well trained voice of wide range (three octaves), are completed with scale patterns sung rapidly in all three octaves. This works as a climax since, up to this point, on the whole the tempo of the *ālāpana* has been slow (*caukakāla*) and only incidentally moderate (*madhyama kāla*).

The *tāna*. This second section of the improvisation, which always follows the *ālāpana* section, and is executed in moderate speed, may be compared with the Hindustānī *jor* or *joḍa*, which immediately follows the *ālāp*. Like the *jor*, the *tāna* section has a basic rhythm which lacks the regular cycle of a particular tāla. The musical phrases of the Karṇāṭak *tāna* are sung in uniform speed to meaningless words (such as *tānamta*, *tānanna*, *tānamna*,[126] etc.), which are sometimes replaced by solfa syllables. *Tāna* phrases are classified according to their characteristic rhythmic motifs. These special types of *tānas* are called after human beings or various animals, probably in imitation of their gaits. Sambamoorthy[127] mentions *manava* (human), *aśva* (horse), *gaja* (elephant), *markaṭa* (monkey), *mayūra* (peacock), *kukkuṭa* (cock), *maṇḍūka* (frog) and *cakra* (goose) *tānas* without describing their rhythmical structure.

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[124] In ancient Indian musical theory *vidārī* denotes the subsection of a song. Cf. ŚārṇSR. 5, 72-74; KuSR. 2, 4, 1, 24-27.

[125] This term, which is not clearly defined in ŚārṅSR., also indicates an *ālāpana* section in the ancient music examples. Cf. ŚārṅSR. vol. II, p. 33, 35, etc. SambSIM. IV, p. 16 mentions the term *vartani* in connection with the *tāna* section as well.

[126] In his article "Later Saṃgīta Literature" (Sangeet Natak Akademi Bulletin 17, 1960, p. 10) V. Raghavan points out that according to the Saṃgīta Cintāmaṇi (Ms. in Tanjore Sarasvati Mahal Library, Burnell cat. 11569 a) the syllables *ta*, *na*, *tam*, *nam*, *tada* and *ham* used in singing constitute the so-called *pañcākṣaramantra* of music.

[127] SambSIM. IV, p. 16.

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The *pallavi*, the third section of the improvised *pallavi* composition, is intricate and calls for detailed description. In vocal compositions the text of the melody which constitutes the main theme (*pallavi*) of the improvisation may be religious or secular (i.e. erotic, humorous or even satirical) and, in spite of its brevity, must be a telling phrase. Sometimes the first words of familiar classical songs (*kritis* or *padas*) are quoted.[128] The melody itself must adhere to the following rules: It may cover from one to four[129] complete tāla cycles and is divided into two equal or unequal parts (*aṅga*) by an imaginary line (*padagarbham* or *arudi*). As a result of this division, there is a point of rest (*viśrānti*) which coincides with the first *drutam* note appearing after the dividing line. This particular note (*arudi* note) must coincide with the initial note, its octave or its consonant (*saṃvādin*).[130] The position of the final note is usually directly above or below the initial note. A pallavi melody does not always run parallel with the āvartas as it can enter at different points in the cycle. When the melody starts at the beginning of the cycle, which as a rule coincides with the main beat or *sam*, the start (Sanskrit: *graha*; Tamil: *eduppu*) is described as "coincident" (*sama*); when the melody starts before the beginning of the rhythmic cycle, or rather before the *sam*, the start is described as *atīta graha*; when the melody starts after the *sam*, the start is described as *anāgata graha*.

The development of the *pallavi* theme is as follows:[131]

a. *The pallavi* melody. In order to familiarize the audience with the main theme of the composition, the melody is sung three or four times at the commencement of the pallavi development, even when the concert is purely instrumental.

b. The *saṃgatis*. After the melody has thus been introduced to the audience, the soloist builds variations on certain phrases of the *pallavi* theme.

c. The *anuloma* and the *pratiloma*. Then the soloist accelerates his speed by doubling or quadrupling the number of notes notes in the *āvarta*, while the basic rhythm (*tāla*) remains unchanged. This means that the *pallavi* theme is performed twice or four times within its original rhythmic cycle(s). This procedure (*anuloma*) can also be reversed (*viloma-anuloma*), so that the soloist slows down his speed to use twice or

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[128] Compare SambSIM. IV, p. 23 and 46.

[129] *Pallavis* in *ādi* or *jhampa tāla* usually contain one or two *āvartas*, in *rūpaka* or *tripuṭa tāla*, however, two to four *āvartas*. Cf. SambSIM. IV, p. 26.

[130] Which has mostly a perfect fourth or perfect fifth relationship with the initial note.

[131] Compare SambSIM. IV, p. 31-46.

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four times the original number of *āvartas* for one rendering of the theme. A variation of this device is the *pratiloma* which only applies to vocal music: the soloist sings the *pallavi* theme in the original tempo whilst indicating with his hands twice or four times the original number of *āvartas*. In the opposite procedure (*viloma-pratiloma*), without changing the tempo of his singing, the soloist's hands indicate a twice or four times slower tempo, so that the *pallavi* theme covers only half or a quarter of the duration of his hand-beaten *āvartas*.

d. The *tisram*. This term denotes a special rhythmic variation of the *pallavi* theme. The basic time units (*tāla-akṣara*) of the *āvarta* are subdivided into three smaller time units. This principle, called *tisram gati*, is only one of the five varieties of *gatibheda*, i.e. the Karṇāṭak system of dividing basic time units.[132]

e. The *niraval*. This term denotes a type of variation which affords the soloist wide scope to display his ingenuity. The notes of the *pallavi* theme undergo change, but its basic rhythmic structure, i.e. the rhythmic setting of its text in the rhythmic cycle, remains intact. First part of the theme, but gradually the whole *pallavi* theme is developed in this way. This device resembles the "*talea*" of fourteenth century European isorhythmic compositions. *Niravals* are not confined to *pallavi* compositions; they are also found in the *caraṇas* of the *kritis*.[133] After finishing a *niraval* in a *pallavi* improvisation, the *pallavi* theme is repeated in its original form.

f. The *kalpana svaras*. This episode is a detailed exposition of the melodic material of the rāga. The length of the musical phrases is gradually increased. The first phrase contains only one *āvarta*, whereas the second and following phrases consist of two, four and eight *āvartas* respectively. The musician may divide the basic time units according to the rules of *gatibheda*[134] and may also apply the five different varieties (*jāti*)[135] of the tāla. This means that he may divide the *aṅga* (i.e. the main bar also called *laghu* and indicated by the sign: I) into three, four, five, seven or nine basic time units (*tāla-akṣara*). These divisions are respectively called *tisra*, *caturaśra*, *khaṇḍa*, *miśra* and *saṃkīrṇa jāti*. In a vocal performance *kalpana svaras* are sung to solfa

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[132] SambSIM. III, p. 101 f. mentions divisions (*gatibheda*, also called *naḍaibheda*) into three (*tisra*), four (*caturaśra*), five (*khaṇḍa*), seven (*miśra*) and nine (*saṅkīrṇa*) units.

[133] Śyāma Śāstrī's kriti *Saroja dala netri* in the rāga *śaṃkarābharaṇa* sung by Mrs. Subbulakshmi (record no. PMAE 501) is a classical example of *niraval* produced by an excellent Karṇāṭak vocalist. Cf. also SambSIM. IV, p. 74 f.

[134] Compare note 131.

[135] Compare SambSIM. II, p. 22 f. and 27 f., tables V and VI.

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syllables. However, they are no mere solfeggios but, as in the case of the North Indian *tāns*, melodic or rhythmic variations on the *pallavi* theme or on parts of it. Although *kalpana svaras* are typical of a *pallavi* improvisation, they also appear in compositions, such as the *kriti*, where they may follow the *pallavi*, *anupallavi* or the *caraṇa* theme. The *kalpana svara* episode of a *pallavi* improvisation gives the soloist ample opportunity to express his skill and inventiveness. It invariably ends with the traditional final phrase, the so-called "crown" (*makuṭa*), which warns the drummer (*mṛdaṅga* player) that he has to work up to the climax.

g. The *rāgamālikā*. After the *kalpana svaras* several series of solfa passages are executed in different rāgas. In imitation of the composition of that name, this episode is called "garland of rāgas" (*rāgamālikā*). Each solfeggio episode in a particular rāga concludes with a solfa passage in the original rāga followed by the *pallavi* melody, which is also sung in the original rāga. Occasionally the *pallavi* theme, which retains its original rhythmic structure throughout this episode, appears in a new rāga. But then some solfa passages as well as the *pallavi* theme itself should be performed in the original rāga after the peculiar presentation of the theme. Sometimes all the rāgas used in the *rāgamālikā* episode are reproduced in reverse order, after which the *pallavi* melody is repeated in the original rāga. This episode is concluded with a series of solfa passages presented in the original rāga.

h. The *tālamālikā*. If a musican performs the *pallavi* theme and its variations (*kalpana svaras*) in different tālas, the presentation is called *tālamālikā* in imitation of the composition of that name.

i. The *rāgatālamālikā*. The *pallavi* can also be presented in a new rāga simultaneously with a new tāla. This procedure is called *rāgatāla-mālikā*, which is also the name of an independent composition.

The conclusion. At the conclusion of a *pallavi* improvisation the original *pallavi* melody is executed at a slightly accelerated speed. Then a few *āvartas* of *kalpana svaras* are performed at moderate speed (*madhya-makāla*). The improvisation ends in the same ways as it started, that is with a short *ālāpana*.

Dramatic music

Having discussed the formal structure of certain Karṇāṭak musical compositions, such as the *padavarṇam*, the *padam*, the *tillānā* and the *jātisvaram*, which can be suitably performed at either concerts or at dance recitals and

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hence represent both concert and dramatic music, we now turn to a purely dramatic musical composition known as the *geyanāṭakam*.[136] This type of Karṇāṭak composition, the so-called Karṇāṭak opera, also named *iśai nāṭakam* (Tamil), *saṃgītarūpakam* or *gānanāṭakam* (Sanskrit) is a complex dramatic work combining literature, dance and music. In the *geyanāṭaka*, which has its roots in the dance drama (*nṛtyanāṭaka*), although there is some pure dancing the language of gesture (*abhinaya*) predominates, whereas in the dance drama pure dance (*nṛtya*) and gesture (*abhinaya*) are equally important.[137] In the older South Indian *yakṣagāna* dance drama, which has kept alive for four hundred years in the Andhra district and Tamilnad,[138] true gesture language is absent. The music of this type of dance drama, which is produced by a singer (the *bhagavatār*, who is at the same time the director of the dancers), two drummers and a musician playing a bagpipe-like instrument (*puṅgi*), is of special interest, since its rāgas are not the current rāgas of Karṇāṭak music.[139]

Dance dramas (*yakṣagāna, kuchipudi nāṭaka*,[140] *bhagavata mela nāṭaka*[141] and Tamil *kuravañji*[142]) as well as Karṇāṭak operas contain a number of compositions called *daru*,[143] which are story-songs based on erotic, historical, epic or puranic themes. Sambamoorthy distinguishes the following types of *daru*:[144]

1. the entrance song (*praveśika* or *pātrapraveśa daru*),
2. the descriptive song (*varṇana daru*),
3. the musical dialogue (*saṃvāda daru*),
4. the dialogue with statements and counter statements (*uttarapratyuttara daru*),
5. the stick-play song (*kōlāṭṭa daru*),
6. the song called *konaṅgi daru*, which is associated with the divine clown (*konaṅgi dāsari*), and
7. the musical soliloquy (*svagata daru*).

[136] Compare SambD. II, p. 187; SambSIM. IV, p. 196 ff.; SambH., p. 83 ff.

[137] Compare SambD. II, p. 187, col. 1.

[138] Compare Ragini Devi, Dance Dialects of India, Vikas Publications, Delhi, London, 1972 p. 133; Bhavnani, The Dance in India, p. 80 f.

[139] Devi, Dance Dialects, p. 137.

[140] i.e. dance dramas in Telugu, the language of Andhra district, according to the tradition of Kuchipudi. Compare Rina Singha and Reginald Massey, Indian Dances, Their History and Growth, London 1967, p. 62 f.; Bhavnani, The Dance in India, p. 55 f.

[141] i.e. a particular type of temple dance drama performed by men of priestly class (*bhagavatas*) during the Narasimha Jayanti festival (in May or June). Cf. Singha and Massey, Indian Dances, ch. 6, p. 68 f.; Bhavnani, The Dance in India, p. 79 f.

[142] i.e. a folk dance drama, performed by the Kuravas, who are Dravidian gypsies. Cf. Singha and Massey, Indian Dances, ch. 7, p. 73 f.; SambSIM. IV, p. 222; Bhavnani, o.c., p. 36.

[143] Compare SambSIM. III, p. 218.

[144] See note 143.

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According to Sambamoorthy and Raghavan,[145] *daru* songs may be in some way connected with the ancient *dhruva* songs, i.e. the ancient stage songs described in the thirty-second chapter of the Nāṭyaśastra. Raghavan has clearly stressed the importance of Bharata's *dhruva* songs in ancient Indian drama, which editors and historians have long tended to overlook. After mentioning the famous fourth act of Kālidāsa's Vikramorvaśīya, of which the musical version has come down to us intact, Raghavan cites[146] interesting examples of *dhruva* songs used in Viśvamitra's Anargharāghava, Rājaśekhara's Balarāmāyaṇa, Balabharata and Viddhasalabhañjika, and Harṣa's Ratnāvali, the staging of which is discussed by Dāmodaragupta in his Kuṭṭanīmata. Referring to Mataṅga's Bṛhaddeśī,[147] Raghavan[148] states that in *dhruva* songs particular rāgas were required for particular dramatic situations. Another significant reference given by the same author[149] is to Nānyadeva's Bharatabhāṣya (an eleventh century commentary on the Nāṭyaśāstra),[150] which specifies the appropriate *rāga*, *tāla* and *rasa* for every *dhruva* metre mentioned by Bharata. Music was probably of vital importance in early Indian drama. Raghavan suggests[151] that it is actually part of the action itself in the first act of the Nāgānanda, in the second act of the Mālavikāgnimitra and in the opening of the Ratnāvali.

Sambamoorthy holds[152] that the ancient tradition is continued in the famous *bhagavata-mela nāṭakas* composed by Veṅkaṭarāma Śāstrī (ca. 1800)[153] and in the *kuchipudi* dance dramas. Some sacred works, such as Jayadeva's Gītagovinda (dating from the twelfth century)[154] and Nārāyaṇa Tirtha's Kṛṣṇalīlataraṅginī (dating from the sixteenth century),[155] which are favourites of the *kuchipudi* dancers, may possibly be regarded as intermediate links between the ancient and modern dance dramas.

In North India the old tradition of the music drama was continued in the *kirtanīya nātaks*.[156] These are plays written in Sanskrit and Maithili, con-

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[145] V. Raghavan, Music in ancient Indian drama, in: J.M.A.M. 25 (1954), p. 79-92.

[146] o.c., p. 85.

[147] MBṛh. p. 89, 93, 95 and 100.

[148] o.c., p. 88.

[149] See note 148.

[150] Nānyadeva, Bharatabhāṣya, handwritten copy of the Poona ms. from Mr. Danielou's Institute for Comparative Music Studies at Venice, chapter X.

[151] o.c., p. 89.

[152] SambH., p. 92.

[153] Compare Singha and Massey, Indian Dances, p. 69

[154] a *śṛṅgāra mahākāvya* in Sanskrit consisting of twelve *sargas* and containing verses (*śloka*), prose passages and twenty-four songs.

[155] a dance drama in twelve sections (*taraṅga*) containing *darus*, *ślokas* and prose.

[156] Compare J.C. Mathur, Traditional Theatre. The Historical Perspective, in: Sangeet Natak 21 (July-Sept. 1971), p. 46-52, especially p. 48.

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taining vernacular songs (in imitation of the ancient *dhruva* songs which were always in the Apabhraṃśa dialect) set to particular rāgas and tālas and alternating with the dialogues. The fourteenth century farce Dhūrttasamāgama (originally in Sanskrit, later re-written in Maithili by Jyotirīśvar Thakur),[157] which is the oldest vernacular work in North India, probably contained twenty Maithili songs, from which eight are missing. According to the editor these songs, the rāgas[158] and tālas[159] of which are mentioned by the author, are dramatic pieces in the true sense and bear some resemblance to Jayadeva's Gītagovinda.

Karṇāṭak opera (*geyanāṭakam*), which originated from the South Indian dance drama, is represented by the following works:

The *Rāmanāṭakam* by Aruṇācala Kavirāyar (1711-1778). The music of this opera was composed by two of Kavirāyar's disciples, Kodandarāmayyar and Veṅkaṭarāmayyar.[160]

Three operas[161] namely *Prahlāda Bhakti Vijayam*, *Nauka Caritram* and *Sītarāma Vijayam* by the famous Karṇāṭak composer Tyāgarāja (1767-1847),[162] who was the first to eliminate dancing from his dramas.

The well known Tamil opera *Nandanār Caritram* and the three shorter operas *Iyarpagai Nāyanār Caritram*, *Tirunīlakaṇṭha Nāyanār Caritram* and *Kāraikāl Ammaiyār Caritram* by Gopālakṛṣṇa Bhārati (1810-1896).[163]

Sacred Music

Sacred Indian music opens a vast field of research which does not lend itself to brief discussion. Just as religion influences almost all the activities of Indian life, so does religious music affect practically every branch of Indian music.

In regard to Hindustānī religious music we have only examined the *bhajana* and the *kīrtana*. Detailed discussion of Karṇāṭak religious music would far exceed the scope of this book; so for present purposes the following classification, which to some extent also holds for Hindustānī religious music, must suffice:

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[157] Edited by Śrījayakānta Miśra, Allahabad 1960.

[158] Viz.: *vibhāṣā*, *sāraṅgī*, *barālī* (i.e. *varāṭī*), *lalita*, *mālava*, *naṭa*, *kānala* (i.e. *karnāṭa*), *sānu* (?), *deśākha*, *kolāva* (*kolāhala?*) and *dhanaśi*.

[159] Viz.: *paṇitāla*, *ekatālī*, *yatitāla*, *pratitāla*, *tritāla* and *parimaṭatāla*.

[160] Compare SambH. p. 90.

[161] Compare P. Sambamoorthy, The Operas of Tyagaraja, in: Sangeet Natak 6 (oct.-dec. 1967), p. 36-39.

[162] Compare P. Sambamoorthy, Tyāgarāja, New Delhi 1967; Idem, Great Composers II, Tyāgarāja, Madras ²1970; Bibliography of Works on Śrī Tyāgarāja, in: Sangeet Natak 6, p. 47-57.

[163] Compare SambH. p. 91 f.; SambD. II, p. 196 ff.

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a. Ritualistic music, namely music accompanying the rituals of various Indian religions.
b. Non-ritualistic, religious music, including various types of religious hymns.
c. Music accompanying discourses of a religious character.
d. Music accompanying religious dance dramas.

a. Karṇāṭak ritualistic music is of special interest, since certain South Indian sects, or rather "branches" (*śākhā*), for example those of the Kauthumas and Nambudiris, have preserved ancient Vedic traditions[164] in their singing of hymns from the Sāmaveda and Ṛgveda. Unfortunately, the connection between the musical notation of the old ritualistic hymns as laid down in the song books (*gāna*)[165] of the Kauthumas, Jaiminīyas and Rāṇāyanīyas and the living tradition preserved by the priest-singers of these sects is not clear. It should be remembered that in India musical notation has never been accorded the same importance as it holds in Western music. The old religious song books (*gāna*) may have served the same purpose as notations of classical Indian music. They were most probably merely written down for purposes of study. As in the past, even today Indian singers of classical music usually only jot down the words of songs, bearing in mind the corresponding melodies as taught by several generations of musicians belonging to one particular tradition (*gharāṇa*).

b. South India has produced a rich variety of religious hymns. Here only the *kīrtana*, *tēvāram* and *maṅgalam* will be briefly discussed.

The *kīrtana*, which is the religious forefather of the classical Karṇāṭak *kriti* composition, was originally a simple song intended for congregational singing. In contradistinction to the classical *kriti*, which mostly has a three part structure (*pallavi*, *anupallavi* and *caraṇa*), the simpler *kīrtana* merely consists of a *pallavi* refrain repeated at the conclusion of each *caraṇa*, and a number of *caraṇas* the text of which is sung to the same melody in the same way as the couplets of a strophical song are sung. This type of *kīrtana* is called *dvidhatu* (lit. "having two melodies", i.e. one for the *pallavi* and one for the *caraṇas*), whereas in the *ekadhatu* (lit. "having one melody") *kīrtanas* the *pallavi* and the *caraṇas* (sung continuously without repetition of

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[164] Compare Vedic Recitation and Chant, recorded by A. Daniélou, BM 30 L 2006; The Four Vedas, Recordings by J. Levy and J. F. Staal, AHM 4126.

[165] Compare chapter 1. Cf. also J. M. van der Hoogt, The Vedic Chant Studied in Its Textual and Melodic Forms, Wageningen 1929; Richard Simon, Die Notationen der vedischen Liederbücher, in: Wiener Zts. f. d. Kunde d. Morgenl. 27 (1913), p. 305-346; The Same, Das Pañcavidhasūtra, Breslau 1913; Idem, Das Puṣpasūtra, in: Abh. d. ph.-ph. Kl. d. kgl. bayer. Ak. d. Wiss. 23 (1909), p. 481-780; J. F. Staal, Nambudiri Veda Recitation, The Hague 1961.

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the *pallavi*) have one and the same melody. Using both types of *kīrtanas*, Tyāgarāja, Vijaya Gopāla and Bhadrācala have composed *divyanāma kīrtanas*,[166] which are songs in praise of particular deities. In the so-called *nāmāvali kīrtanas*,[167] the text of which merely mentions the names and synonyms of a god, the *pallavi* refrain is sung by the devotees, while the leader sings the *caraṇas*. In addition to this style of performance known as the *responsorial* style, there is the *antiphonal* style in which the *pallavi* and the *caraṇa* are sung by two different groups of devotees.

The *maṅgalam*[168] is a song of salutation performed at the end of every Karṇāṭak concert, opera or *bhajana*. It has the above mentioned *kīrtana* form consisting of a pallavi and a number of *caraṇas*.

The South Indian professional temple singers (*oduvārs*) have preserved an ancient tradition in their singing of *tēvārams*, which are hymns by the three great saint-poets Tirujñānasambandar and Appar (Tirunāvukkarasu) of the seventh century and Sundaramūrti Nāyanār of the ninth century. These hymns were originally sung in the ancient Tamil modes (*pans*) which, according to Sambamoorthy,[169] represent ancient rāgas of local origin (*deśī rāgas*) as described in the eight century musical treatise, the Bṛhaddeśī by Mataṅga. The original melodies of these ancient hymns have been lost in course of time. Nowadays the hymns are sung to tunes composed by the eighteenth century pious minstrel Gurusvāmī Desigar of Tiruvarur.[170]

During a religious meeting (*bhajana*),[171] which may last several hours, a cycle of religious hymns consisting of *nāmāvali kīrtanas*, *dhyāna ślokas* (Sanskrit verses for meditation), *maṅgalas*, *divyanāma kīrtanas* and other hymns are sung.

Many of the Karṇāṭak ritualistic and religious hymns, especially the Tamil hymns, that have not been discussed here, can only be studied from the original sources, since scientific literature in English dealing with this subject is not available.

c. In this category falls the *kālakṣepam*,[172] a type of entertainment which aims not only at producing a feeling of joyousness but also at purifying the mind of the listener. The discourse, which is the essence of the

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[166] Compare SambSIM. 4, p. 190; SambD. 1, p. 121.
[167] Compare SambSIM. 4, p. 191; SambD. 3, p. 111.
[168] Compare SambSIM. 4, p. 193; SambD. 3, p. 43 f.
[169] SambH. p. 73. For a list of the *pans* used in the *tēvārams* and their modern equivalents the reader might compare SambH. p. 95 f.; R. Rangaramanuja Ayyangar, History of South Indian (Carnatic) Music From Vedic Times up to the Present, Madras 1972.
[170] Compare Rangaramanuja Ayyangar, History of S. I. Music, p. 56.
[171] Compare SambD. II, p. 276 f.
[172] Compare SambD. II, p. 283 f.

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the kālakṣepam is illustrated with stories from the Purāṇas, the Rāmāyaṇa, the Mahābhārata or from the lives of great saints, and relevant folkloristic or classical songs in different vernaculars.

d. In most types of South Indian dance drama, such as the *bhagavata mela nāṭaka*, *kuchipudi* dance drama, *kathakali*, etc., the religious element dominates though episodes of fighting, love scenes and other secular elements are also present. Within the limited scope of this study it would carry us too far to discuss the structure and historical development of all types of Indian dance drama, more especially since excellent literature on this subject has become available during the last twenty years.[173]

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[173] In addition to the previously cited books on dance the reader may also consult: Kapila Vatsyayan, Classical Indian Dance in Literature and the Arts, Delhi 1968.

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Photographs 3 and 8
by the author.

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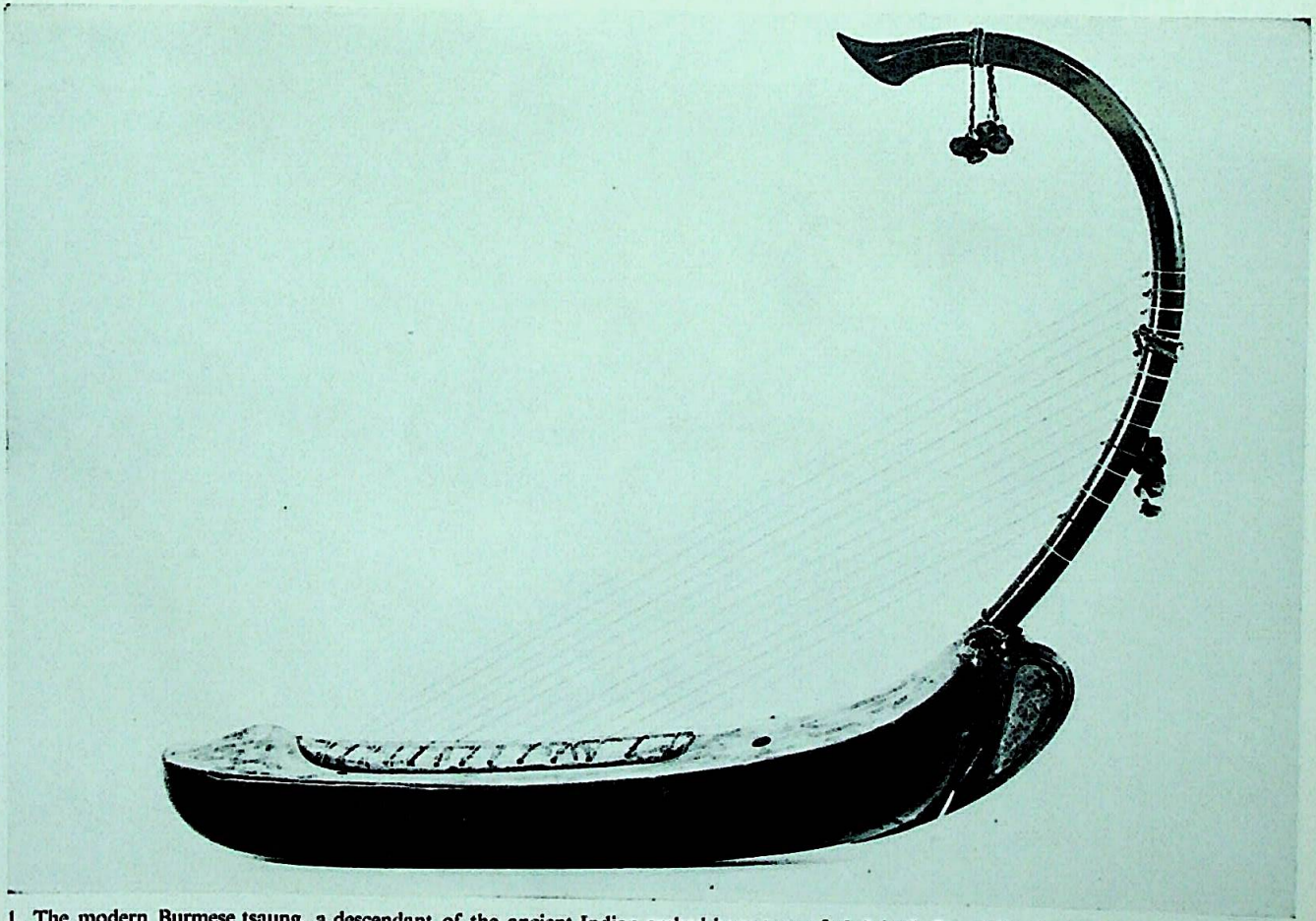

1. The modern Burmese tsaung, a descendant of the ancient Indian arched harp type of vīṇā (coll. Royal Tropical Institute, Amsterdam)

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4. D. Kittapa playing the gottuvādyam, a variety of the Karṇāṭak vīṇā, which requires the use of a wooden cylinder instead of left hand fingering.

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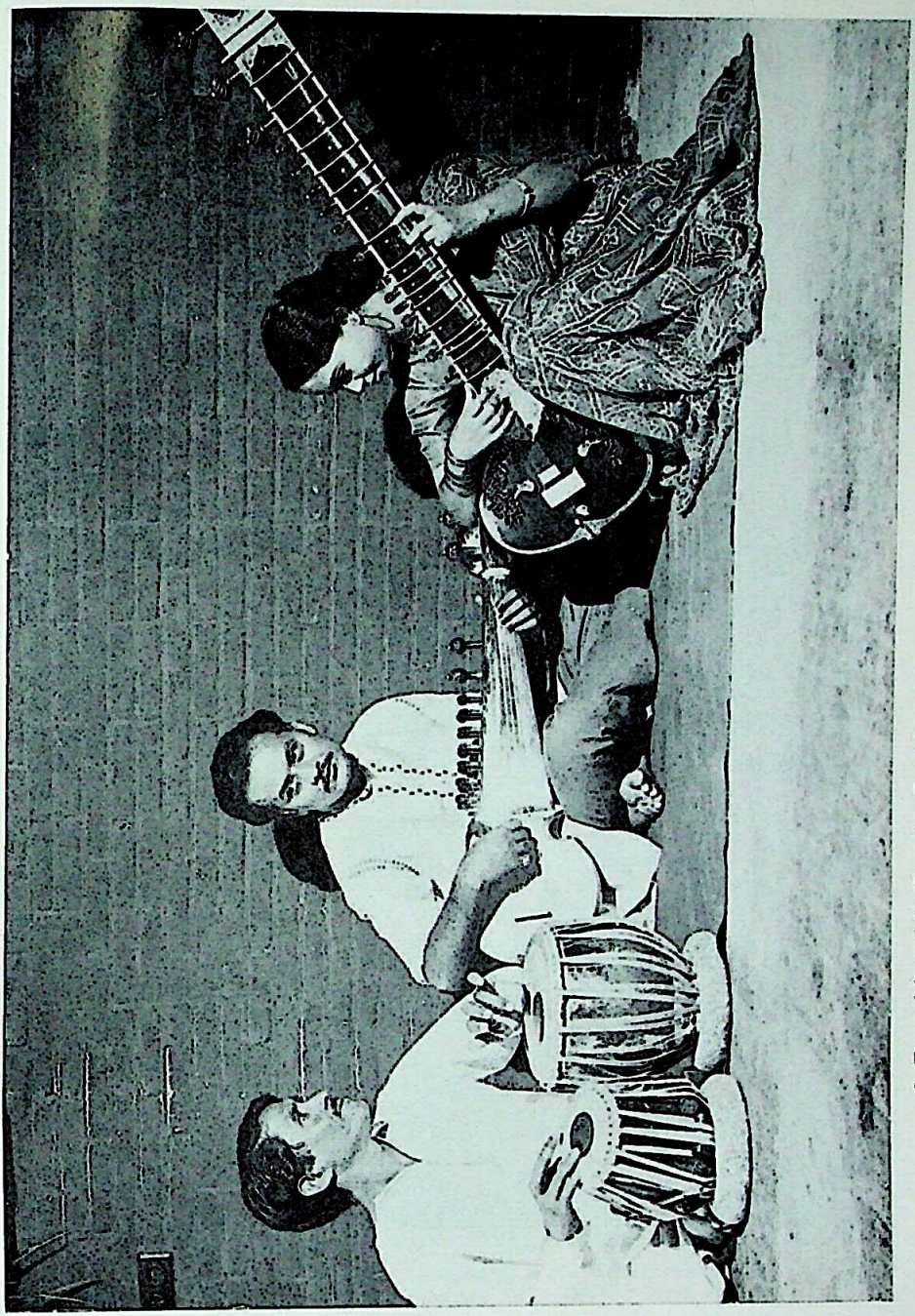

5. From right to left: Sharmista Sen (sitār), Rehmat Ali Khan (sarod), Hidayat Khan (tablā).

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8. A Festival Concert at the Music Academy, Madras 1973, from left to right: Dandamuni Ram Mohan Rao (mrdaṅgam), N. Ramani (veṇu), V. V. Subramaniam (violin).

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9. Hariprasad Chaurasia playing the North Indian flute (bansri).

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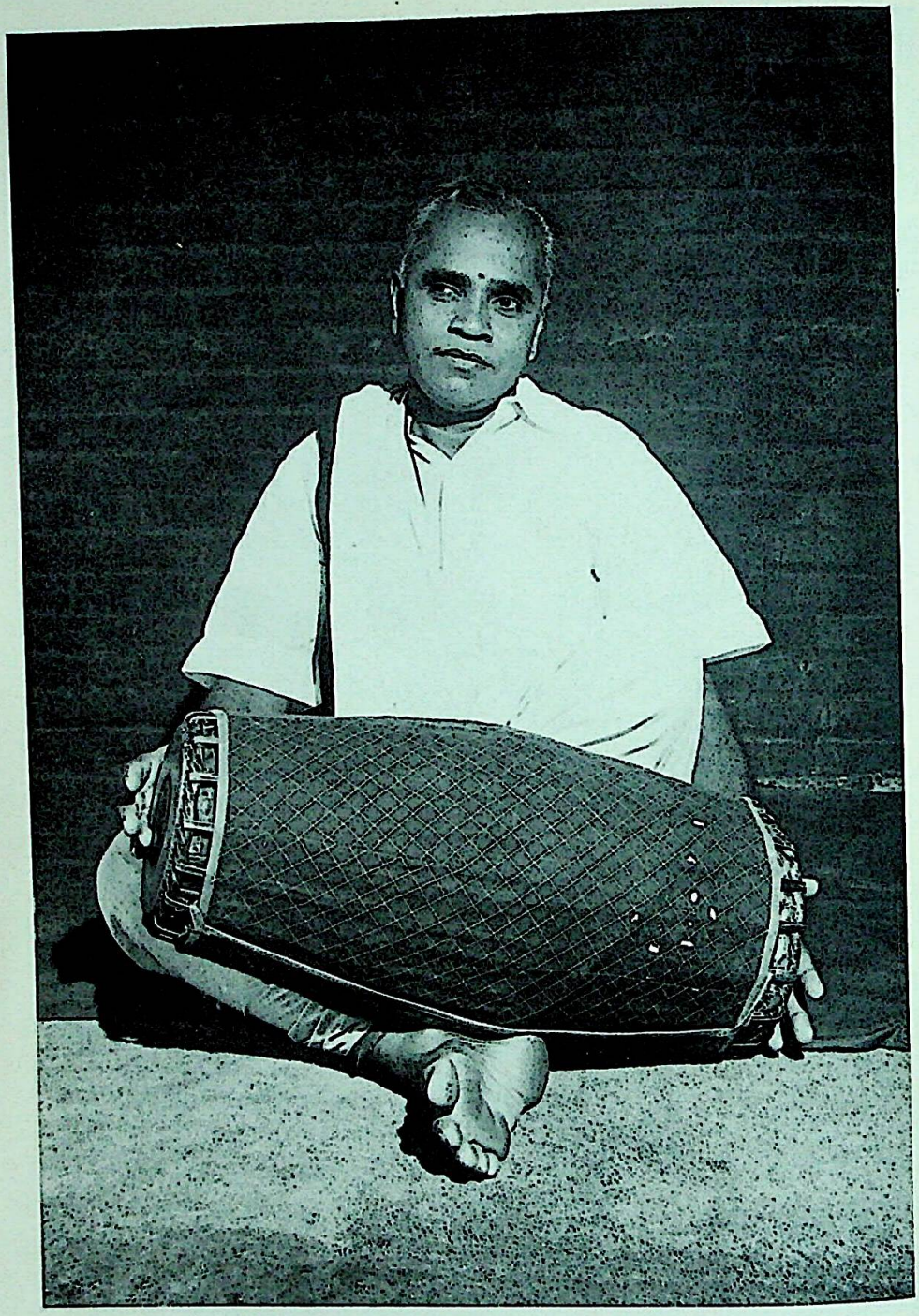

12. Suchindram Krishnan playing the South Indian double-face drum (mṛdaṅgam).

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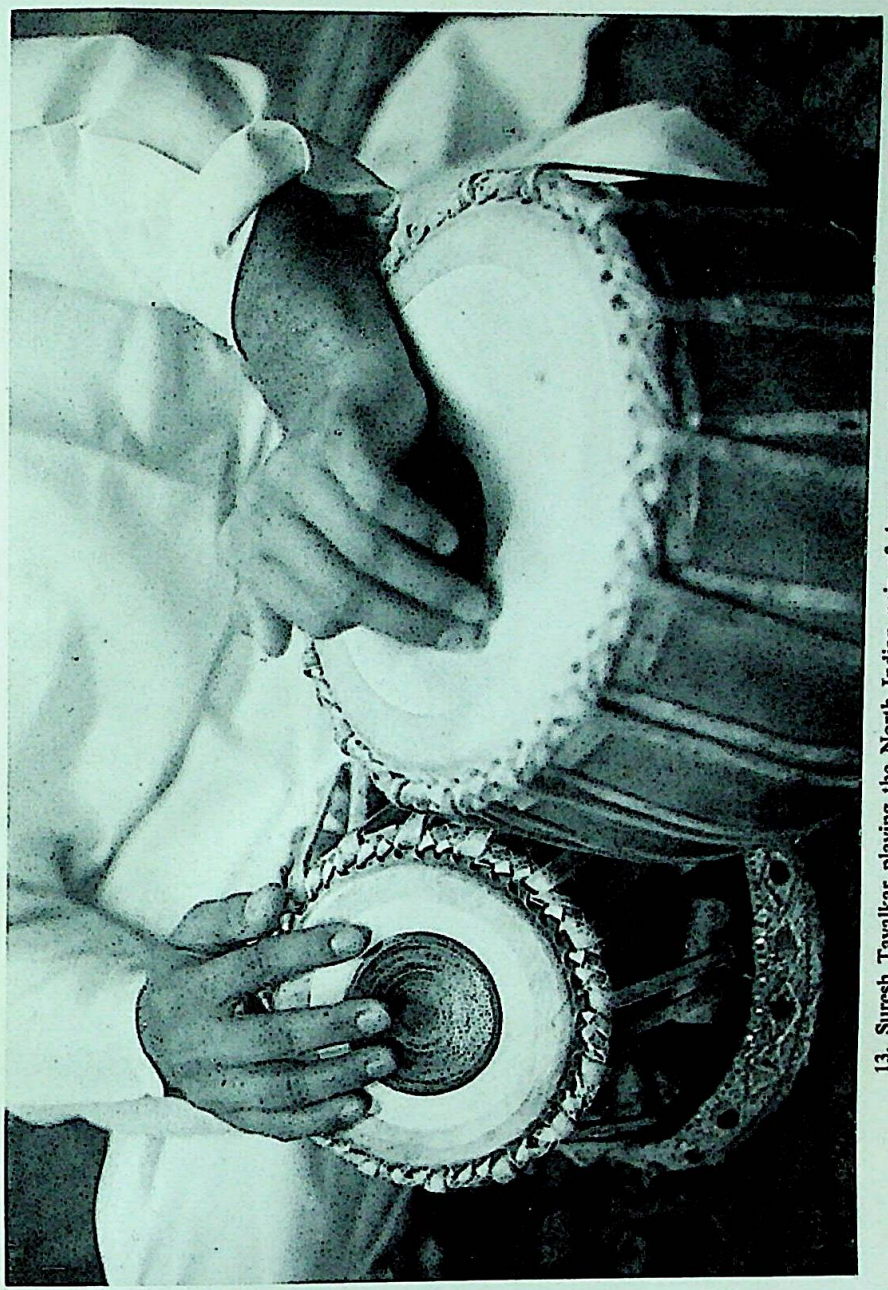

13. Suresh Tavalkar playing the North Indian pair of drums, named tablā and bāyā.

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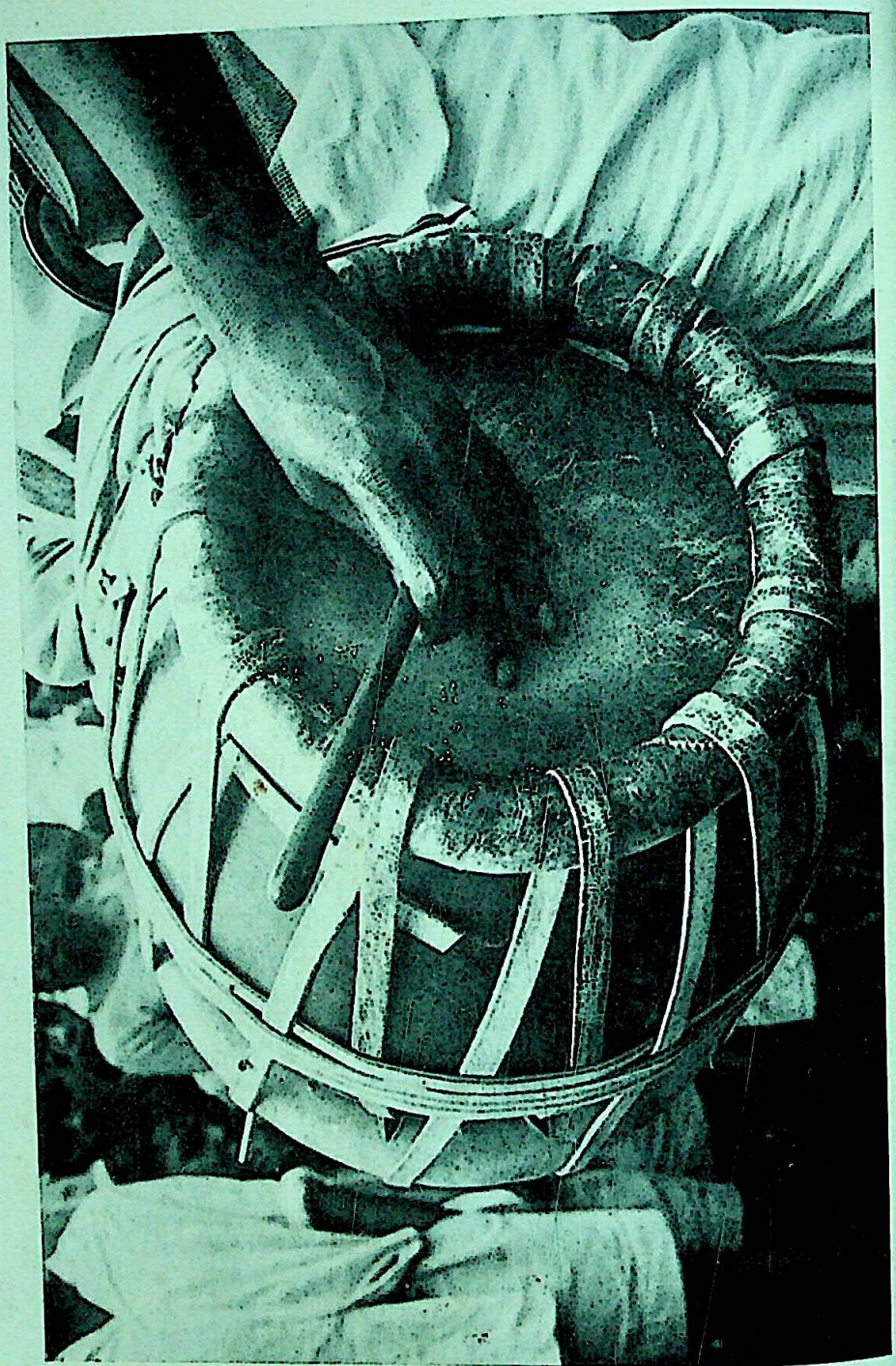

14. The tavil, the Karṇāṭak double-face drum which usually accompanies the nāgasvaram.

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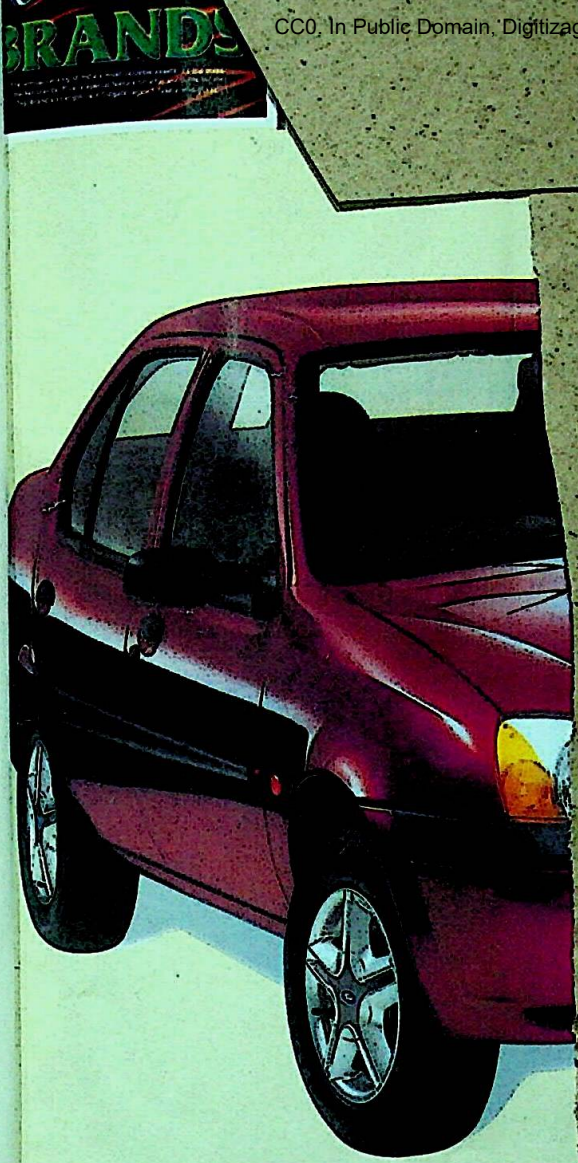

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